EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE, PRACTICE AND ATTITUDE REGARDING HAND WASHING AMONG SCHOOL CHILDREN AT A SELECTED SCHOOL, SERKADU IN VELLORE DISTRICT

By

Ms. NIVETHA. R

A DISSERTATION SUBMITTED TO
THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY, CHENNAI
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE
DEGREE OF MASTER OF SCIENCE IN NURSING

APRIL – 2016

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CERTIFICATE

This is to certify that **"A study to assess the effectiveness of structured teaching programme on knowledge, practice and attitude regarding hand washing among school children at a selected school, Serkadu in Vellore District"** is a bonafide work done by **Ms.Nivetha. R, M.Sc.(N) II Year,** Karpaga Vinayaga College of Nursing, Kancheepuram District, in partial fulfilment of **The Tamilnadu Dr. M.G.R. Medical University** rules and regulations towards the award of the degree of Master of Science in Nursing, Branch-II, Child Health Nursing, under my guidance and supervision during the academic year 2014-2016.

Date: **Signature of the Principal**

Place:

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INTERNAL EXAMINER **EXTERNAL EXAMINER**

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SYNOPSIS

Keeping hands clean through improved hand hygiene is one of the most important steps one can take to avoid getting sick and spreading germs to others. A study was conducted to assess the effectiveness of structured teaching programme on knowledge, practice and attitude regarding hand washing among school children at a selected school, Serkadu in Vellore District".

The objectives were, to assess the knowledge, practice and attitude of school children regarding hand washing, to evaluate the effectiveness of structured teaching programme (STP) on knowledge, practice and attitude regarding hand washing among school children, to associate the selected demographic variables with knowledge, practice and attitude regarding hand washing among school children.

A quantitative research approach of pre experimental with one group pre and post test design was chosen for this study. By using stratified random sampling technique a total of 100 samples were included for the study. The structured teaching programme was given by researcher. Pre and post test was conducted by multiple choice questions, observation check list and modified likert attitude scale. Data were recorded and coded. The data analysis was done by using descriptive and inferential statistics. The result revealed that there was a statistically significant difference between pre and post test knowledge, practice and attitude scores regarding hand washing among school children at $p < 0.001$. This study implies that creating awareness on hand washing will prevent the occurrence of infection among school children.

Keywords: Structured Teaching Programme, School Children, Knowledge, Practice, Attitude.

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CHAPTER-I

INTRODUCTION

"A heart to resolve, a head to contrive and a hand to execute."

Edward Gibbon

BACKGROUND OF THE STUDY

"Our hands do so much for us. They are capable of a wide variety of functions like touching, grasping, feeling, holding, manipulating, caressing, and performing daily activities and more. They are a vitally important part of who we are and how we see ourselves"**.**

Good hand hygiene is one of the most critical control strategies in outbreak management. Hand hygiene is defined as any method that removes or destroys microorganisms on hands. It is well-documented that the most important measure for preventing the spread of pathogens is effective hand washing.

Germs are found everywhere**.** Germs are so small that cannot be seen**.** Germs can make person sick**.** They can get rid of germs by washing their hands**.** Generally the person touches 15 objects in one minute. So easily they can get the infection which increases the mortality and morbidity thereby the cost of health care.

Infection is the invasion of an organism's body tissues by disease-causing agents, their multiplication, and the reaction of host tissues to these organisms and the toxins they produce. Infectious disease, also known as transmissible disease or communicable disease is illness resulting from an infection. Hosts can fight for infections using their immune system. Infectious diseases resulted in 6.6 million deaths in 2014 according to global burden of infectious disease. The branch of medicine that focuses on prevention of infections is called infectiology.

Infection is classified into Acute(develop sudden onset less than 10 days, rapid progression and often with severe symptoms), Chronic(delayed onset slow progression), Primary(initial infection that develop in healthy individual), Secondary(infection develop in individual who already infected),Localized(infection in specific location), Systemic (infection spread to several region), Endogenous(originated within the body), Exogenous(originated from outside), Noso-comial infection(hospital acquired infection), Opportunistic infection (caused by microorganism), Latent (after following infection the pathogen remain in tissues in a hidden form). Washing hands is the easiest way to stop germs from spreading and control transmission of infection. Washing hands at least five times a day reduces the risk of getting a cold, flu and other infections.

Most of the children do not wash their hands before eating and after toilet practice, because they don’t know the importance of hand washing. Hand washing helps stop the spread of germs and illnesses. Once the bacteria and germs are on a child's hands, they can travel to other areas of the body easily. Children spread germs by touching their eyes and mouth. They can also spread germs by shaking another

person's hand, sharing toys and other articles. Thus the children need to learn when and how to wash their hands and its techniques.

Hand washing helps to minimize the spread of influenza, diarrhoea , respiratory infections and it also a preventive measure for child deaths. Hand hygiene is important at every age especially in children. Hand washing is something everyone learns at a very early age and yet many people just don't do it. The problem is that most and in particular young children don't see it as a priority.

Keeping hands clean through improved hand hygiene is one of the most important steps one can take to avoid getting sick and spreading germs to others. Many diseases and conditions are spread by not washing hands with soap and clean running water. The use of soap and water is the best way to keep hands clean and free of micro-organisms.Washing hands after coughing, sneezing or blowing nose, feeding or playing with animals, playing outside, after using toilets and bathrooms before eating or touching food or drinks are inevitable to prevent the infection.

Children become infected with respiratory illnesses such as influenza or the common cold, diarrhoea. For example, if they do not wash their hands before touching their eyes, nose, or mouth. Indeed, the Centre for Disease Control and Prevention (CDC) 2014 has stated: "one of the most important measures for preventing the spread of pathogens is effective hand washing". It protects best against diseases transmitted through fecal-oral routes (such as many forms of gastroenteritis) and direct physical contact such as impetigo, which may increase the child mortality and morbidity.

Diarrhoea and pneumonia are among the leading causes of child mortality worldwide. In fact, over two million children under five years die due to diarrhoea and pneumonia every year. According to WHO (2014), In India, this translates to the loss of over six lakhs children under the age of five, every year. Many of these deaths are easily preventable through simple practices such as hand washing with soap. Hand washing can have a major impact on public health in any country and significantly reduce the two leading causes of childhood mortality.

Hand washing with soap can prevent the transmission of a variety of pathogens; it may be more effective than any single vaccine or hygiene behaviour. Hand washing with soap can be viewed as an essential means of preventing cross infections. If the millennium development targets for reduction in child mortality are to be met, hand washing habits must be improved along with access to safe water and sanitation.

Generally children are receptive to learn new behaviours, when it is taught by their teachers, parents or elders. When the practice of hand washing is inculcated in their mind they adhere it strictly and develops it as their own behaviour.

Children need to understand why it is important to wash their hands. To do this they need help from their parents, caregivers, and teachers or from a member of staff at their schools. Children love to play with mud and sand, which host a lot of germs which can cause illness. Teaching them the significance of proper hand washing is a very crucial step towards living a healthy life. Encouraging children from an early age to wash their hands will help to ensure that this practice becomes a

lifelong habit. The transmission of common communicable infections such as colds and flu can be prevented by following good hand hygiene. Teaching proper techniques of hand washing to children will not only help to influence their hand washing practices at home but also at school.

Many illnesses starts with poor hand washing. Salmonella, campylobacter, MRSA, flu, diarrhoea and sickness, the common cold, impetigo these are just some of the viruses and infections. Commonly prevailing among school children, because of poor hand hygiene. Hand washing is a scientifically proved effective method to protect the school children from the infectious diseases, because frequent hand washing keeps germs away.

NEED FOR THE STUDY

Proper hand washing is one of the best ways to prevent the spread of infection. It is especially important at school, where small children are in constant contact with each other, often spreading micro-organisms. More over many children don't wash their hands before eating after using the toilets and after playing at the ground in school. Hand washing is significantly important in children as they are vulnerable to illness since they are very playful and more exposed to dirt, soil and other source of infections.

The poor hand hygiene practices are the main causes for disease transmission from one person to another. Generally around two to ten million bacteria can be found between fingertip and elbows. After a person uses a toilet, the number of germs that are present in fingertips. Research shows that there is a reduction in

diarrhoeal diseases by nearly 50% by washing hands with soap and water. There are over 10 million episodes of food-related infection in a year but most of these are related to lack of improper hand washing. By teaching them proper hand washing techniques, school-aged children can keep their own hands clean and also teach other children how to stop the spread of germs.

According to World Health Organization estimates from (2008) diarrhoea and lower respiratory infections are responsible for killing of primary school-aged children worldwide. Since 2008 every October 15, has been designated "Global Hand Washing day", an annual, global initiative which seeks to promote hand washing with soap - the most effective and cheapest way of preventing diarrhoea and acute respiratory infections. These two diseases, in combination, cause the majority of child mortality, causing millions of deaths in developing countries each year.

According to **India facts and statistics., (2013)** there are about 6.3 million Children under the age of five died. Three illnesses-malaria, diarrheal disease, and acute respiratory infection (ARI) - account for most of childhood morbidity and mortality. Diarrhoea and ARI cause 80 percent to 90 percent of all deaths from communicable diseases in children under age 5worldwide. Malaria causes more than 300 million episodes of acute illness and at least 1 million deaths annually in people of all ages. Two recent studies presented global estimates of child deaths due to diarrhoea that were equal to 2.5 million and 2.1 million.ARI is a leading cause of mortality in young children, killing nearly 2 million children under age 5 in developing countries each year.

India has made steady progress in reducing deaths in children younger than 5 years, with total deaths declining from 2.5 million in 2010 to 1.5 million in 2013. This remarkable reduction was possible due to the inception and success of many universal programs like expanded program on immunization, program for the control of diarrheal diseases and acute respiratory infection. Even though the deaths among children under-5 years have declined, the proportional mortality accounted by diarrheal diseases still remains high. Diarrhoea is the third most common cause of death in under-five children, responsible for 13% deaths in this age-group, killing an estimated 300,000 children in India each year. Hand washing also helping in prevent from many illness.

Hand washing is highly habitual; a routine behaviour that can be installed at an early age. Germs can be transmitted in many ways, including: touching dirty hands, changing diapers, through contaminated water and food, through droplets released during a cough or a sneeze from contaminated surfaces and through contact with a sick person's body fluids. Every human being comes in contact with microorganisms present all around like on the door knobs, faucets, light switches, stair railings etc. These things are touched while doing routine work, without thinking much about it and with the same hands, activities such as touching face, eyes, nose and sometimes eating food too are performed. Although many young people are aware of the importance of proper hand hygiene, education focusing on proper hand washing practices in schools is often deficient.

Childhood is acknowledged as the best time to adopt new behaviours. The family, schools are potentially very important places for learning new behaviours.

Schools can provide a stimulating environment to learn about hand washing and other hygiene behaviours, and they can initiate change, with teachers and other students acting as stable role models. Children are potential agents of change within their families and community. By sharing information from school with the family, questioning existing practices at home, and influencing the behaviour of siblings in their care, children can change their own behaviour and that of others.

There are many advantages proved scientifically by many researchers globally. **Yang.m, (2014)** highlighted that poor hygiene practices and inadequate sanitary conditions play major roles in the increased burden of communicable diseases within developing countries. A study was done to evaluate the knowledge, attitudes, and practice of hand hygiene among rural school children in Ethiopia. The result revealed that 52% of students had adequate knowledge on proper hand hygiene. Most students reported that hand washing was done before meals (99.0%), but only 36.2% reported using soap. Although 76.7% of students reported that washing hands after defecation was important, only 14.8% actually follows the correct procedure. This study recommended that there is a need for more hand washing and hygiene education in schools.

Guinan, McGuckin-Guinan, &Sevareid,(2014) conducted a study in two schools of Bangalore and Kolkata to find out the extent of germs present in hand, and also the students' perception on hand washing. The study results showed that with regard to students' perception about the dirty areas of the hands, it was observed that majority (78%) felt palm was likely to be more dirty while less than 70% felt that

web spaces could harbour dirt. Almost 86% reported that they washed hands before eating lunch, but only 21.3% said they always used soap while 47.3% never used it. Availability of soap all the time in the school was reported by only 18.4% students. The swabs of 61% children showed potential pathogens. The commonest of these was Staphylococcus aureus which was seen in 44% samples. The study concluded that the student's hands were contaminated before taking food. Although they washed hands before meals, they hardly used soap due to non-availability of soap and recommended that the school authority should be asked to keep soaps in the toilets for hand washing. These are important health concern to be taken care among school children.

J.Adolesc, (2014) assessed hand-washing behaviours and intentions among school children in Bogotá, Colombia, to help identify and overcome barriers to proper hygiene practices. Only 33.6% of the sample reported always or very often washing hands with soap and clean water before eating and after using the toilet. About 7% of students reported regular access to soap and clean water at school. A high level of perceived control was the strongest predictor of positive hand-washing intentions (adjusted odds ratio [AOR] = 6.0; 95% confidence interval [CI] = 4.8, 7.5). Students with proper hand-washing behaviour were less likely to report previous-month gastrointestinal symptoms (OR = 0.8; 95% CI = 0.6, 0.9) or previous-year school absenteeism (OR = 0.7; 95% CI = 0.6, 0.9). It shows that hand washing practices reduces the gastrointestinal symptoms.

J.A Fulkerson, (2013) investigated the effectiveness of a hygiene promotion intervention based on germ awareness in increasing hand washing with soap in rural Indian households. Five interventions and five control villages, with 30 households per village was selected. The intervention reached 40% of the target population. Germ awareness increased as well as reported practice of hand washing. It was observed that hand washing with soap on key occasions was rare (6%), especially after faecal contact (2%).

Garg, etal., (2013) expressed that the children might suffer a more severe burden of hygiene-related diseases compared to adults. In addition, the Global Hand Washing Day is focused on transform the theory of hand washing with soap into an automatic behaviour at homes, schools and communities worldwide. The hands are probably single most important route for transmission of infection at home and community, as they are often have indirect contact with mouth, nose and conjunctiva.

Many childhood diseases can be prevented just by performing simple hand washing by caretakers and families. **Jodrell.C.M, (2012)** Conducted a study in Karachi, Pakistan with children younger than 5 years. Hand washing promotion activities was given for those children, and reported that there was a 50% lower incidence of pneumonia. Children younger than 15 years in households with plain soap had a 53% lower incidence of diarrhoea and a 34% lower incidence of impetigo. The study interpreted that hand washing with soap prevents the two clinical syndromes that cause the largest number of childhood deaths globally-namely,

diarrhoea and acute lower respiratory infections. Hand washing with daily bathing also prevents impetigo.

Vindigni, etal., (2011)explained that most diarrhoea is caused by bacteria, viruses and protozoa in human faeces spread from the stool of one person to the mouth of another. Hands can act as a vector for transmission of faecal pathogens, either via direct person-to-person transmission or by contaminating food that is later consumed and Hand washing promotion could also play a role in mitigating pandemic influenza, particularly during the early stages. The practice is significant for school-children to prevent diarrhoea.

United Nations Children's Fund Water, Sanitation, Hygiene Annual Report, (2009) illustrated that the increased burden of communicable diseases among school children are due to poor personal hygienic practices and inadequate sanitary conditions that remains a concern on the public health agenda in developing countries. Hand washing with warm water and soap can greatly reduce the chances of spreading or getting germs when done correctly. The mechanical action of scrubbing loosens up the dirt and microbes on hands and the soap picks up and binds to the microbes so that the water can wash away. Thus hand washing is the best way to prevent communicable disease.

M. M., Ibrahim, (2010) conducted a study to assess the effectiveness of the "Hand washing University" on teaching youth the benefits of proper hand washing. The "Hand washing University" is an interactive display with several successive

stations through which participants move to learn necessary skills for proper hand washing. Upon completion of the Hand washing University, 87% of youth completed a program assessment survey indicated they felt hand washing was more important. The majority of youth surveyed (66.7%) indicated specific changes they would make in their hand washing behaviour. Overall, results indicated participation in the hand washing University prompts youth and their families to practice proper hand washing techniques.

Hand washing programs among school children may have a lasting effect in reducing school absences. This was evident from a study conducted in elementary schools in Denmark wherein 324 pupils aged 5-14 years showed 66% decrease in pupils with four or more days of absence and a 20 percent increased in children with zero absences. Results strongly suggested that increasing hand hygiene education can have a long term, significant impact on the spread of infection. Almost four-fifth of all infections that cause illnesses can be prevented if child keep their hands properly washed and cleaned.

Many children attend school and school children have been repeatedly implicated in the spread of infectious diseases within schools, homes, and the broader community, school-based hygiene and health promotion strategies have been shown to be cost effective. School-aged children are receptive to learning and thus are more inclined than are adults to change their behaviours and adopt new, more-healthful habits and can therefore act as agents of health change in the context of their social environments. This is especially important because nearly 40% of

students reported caring for a younger sibling and 60% prepare food at home. Moreover, hygiene promotion affects the health of individuals and, in turn, reduces the burden of communicable diseases on the health care, social, and economic systems in terms of p treatment, hospitalization costs, and school and parental work absenteeism.

As children lack hand hygiene in schools a potential for disease transmission is at a higher risk. A school health nurse plays an important role in providing hand washing knowledge to school children since it is cost effective. School health nurses can provide health promotive measures like teaching students, parents and teachers the importance of hand washing, thereby facilitating a healthy and safe environment at home and at school which will provide the foundation for a healthy and active childhood and it will also help them to incorporate this knowledge to other children in the school as well as other people in the society.

In view of the above facts and interest in the topic, the researcher felt the need to assess the knowledge, practice and attitude on hand washing among school children and evaluate the effectiveness of structured teaching programme on knowledge, practice and attitude regarding hand washing among school children.

STATEMENT OF THE PROBLEM

A study to assess the effectiveness of structured teaching program on knowledge, practice and attitude regarding hand washing among school children at a selected school, Serkadu in Vellore district.

OBJECTIVES OF THE STUDY

1. To assess the knowledge, practice and attitude of school children regarding hand washing.
2. To evaluate the effectiveness of structured teaching programme (STP) on knowledge, practice and attitude regarding hand washing among school children.
3. To associate the selected demographic variables with knowledge, practice and attitude regarding hand washing among school children.

OPERATIONAL DEFINITIONS

KNOWLEDGE

It refers to the estimation of level of understanding of school children regarding hand washing as measured by structured multiple choice questions in pre and post test.

PRACTICE

It refers to the observation of practice of steps of hand washing by school children as measured precisely by observational checklist in pre and post test.

ATTITUDE

It refers to the views of the school children about hand washing as estimated by modified likert attitude scale in pre and post test.

EFFECTIVENESS

It refers to the extent to which the structured teaching programme on hand washing yield the desired outcome in improving the level of knowledge, practice and

attitude among school children as evidenced by gain of knowledge, practice and attitude and measured by structured questionnaire in post-test

STRUCTURED TEACHING PROGRAMME

It refers to well planned teaching programme implemented by lecture cum demonstration method regarding hand washing to the school children.

SCHOOL CHILDREN

It refers to schoolchildren aged between 10 -12 years and studying VI or VII standard at a selected school.

HAND WASHING

It refers to the act of cleansing the hands using soap and water following the steps of hand washing, for the purpose of removing microorganisms.

HYPOTHESES

H_1: There is a significant difference between pre and post test level of knowledge, practice and` attitude regarding hand washing among school children before and after structured teaching programme.

H_2: There is a significant association of selected socio demographic variables and health related variables with post test level of knowledge, practice and attitude regarding hand washing among school children.

DELIMITATION OF THE STUDY:

The study was delimited to

- the school children who were aged 10-12 years at a selected school.
- the school children studying VI or VII standard at a selected school.
- the period of six weeks.
- the sample size of 100.

PROJECTED OUTCOME

By this study, the effectiveness of structured teaching programme can be evaluated. The structured teaching programme will have an impact on the knowledge, practice and attitude of the school children regarding hand washing. The school children who are in the age group between 10 – 12 years and studying VI or VII standard will understand the definition, importance, indication, general steps of hand washing and consequences of poor hand washing which will help them to maintain good hand washing practice, reduce the spread of infection and promotes good health.

CHAPTER-II

REVIEW OF LITERATURE

This chapter deals with the literature related to the hand washing and the effectiveness of structured teaching programme on hand washing among school children. The literature was collected extensively and organized under the following headings.

1. **Review of literature related to knowledge, practice and attitude of hand washing among school children.**
2. **Review of literature related to educational interventions among school children regarding hand washing.**

1. Review of literature related to knowledge, practice and attitude of hand washing among school children.

U.S. Centres for disease control and prevention, (2015) conducted a survey and stated that forty million American children contract illnesses every year due to the bacteria on the hands and around eighty thousand of them die due to infections by not washing hands. It is also important to inculcate this habit in children from the very beginning itself so that it becomes a way of life for them. Only 77% of the children actually wash their hands after they use a public toilet.

Almost four-fifths of all infections that cause illnesses can be prevented if child keep their hands were properly washed and cleaned.

Guinan Sevareid,(2015) conducted a study on prevalence of bacteria in the hands of children and their perception on hand washing in two schools of Bangalore and Kolkata. This was assessed by questionnaire as well as by collection of swab from hand and performing bacteriological culture in the laboratory. The study results showed that with regard to students' perception about the dirty areas of the hands, it was observed that majority (78%) felt palm was likely to be more dirty while less than 70% felt that web spaces could harbour dirt. Almost 86% reported that they washed hands before eating lunch, but only 21.3% said they always used soap while 47.3% never used it. Availability of soap all the time in the school was reported by only 18.4% students. The swabs of 61% children showed potential pathogens. The commonest of these was Staphylococcus aureus which was seen in 44% samples. The study concluded that the student's hands were contaminated before taking food. Although they washed hands before meals, they hardly used soap due to non-availability of soap and recommended that the school authority should be asked to keep soaps in the toilets for hand washing.

Alysaa vivas bizugileye, (2014) evaluated that the knowledge, attitude and practice (KAP) of hygiene among rural school children in Ethiopia and assessed the extent to which proper knowledge of hand hygiene was associated with hand hygiene characteristics. This cross-sectional study comprised of 669 students who were interviewed by trained staff. Participants were in grades 1-6 at Angolela Primary School, located in rural Ethiopia. Data consisted of hand washing practices,

knowledge about hand washing. Approximately 52% of students were classified as having adequate knowledge of hand hygiene. Most students reported hand washing before meals (99.0%), but only 36.2% reported using soap. Although 76.7% of students reported that washing hands after defecation was important, only 14.8% reported actually following this practice.

Lupez quintar, (2014) assessed the hand-washing behaviours and intentions among school children in Bogotá, Colombia, to help identify and overcome barriers to proper hygiene practices. Data on hand-washing behaviour and intentions and individual and contextual factors were collected from 2042 sixth- through eighth-grade students in 25 schools in Bogotá via anonymous questionnaires. A member of the school administration or teaching staff completed a questionnaire about the school environment. Site inspections of bathroom facilities were conducted. Only 33.6% of the sample reported always or very often washing hands with soap and clean water before eating and after using the toilet. About 7% of students reported regular access to soap and clean water at school. A high level of perceived control was the strongest predictor of positive hand-washing intentions (adjusted odds ratio [AOR] =6.0; 95% confidence interval [CI] =4.8, 7.5). Students with proper hand-washing behaviour were less likely to report previous-month gastrointestinal symptoms (OR=0.8; 95% CI=0.6, 0.9) or previous-year school absenteeism (OR=0.7; 95% CI=0.6, 0.9).Scarcity of adequate facilities in most schools in Bogotá prevents children from adopting proper hygienic behaviour and thwarts health promotion efforts.

Le thithanhxuan, (2014) conducted a study in six primary and secondary schools and in the homes of four ethnic villages in northern Vietnam. Quantitative methods included face-to-face interviews and demonstration of hand washing protocol to 319 school children in first, fourth, and seventh grades. Qualitative methods included structured observations at six schools and 20 homes comprising 24 children. The dependent variable was the self-reported HWWS behaviour (yes/no). The independent variables included grade, school type, gender, ethnicity group, owning home latrine, and household assets. Logistic regression modelling was performed to examine associations between HWWS behaviour and demographic factors. Among the 319 schoolchildren interviewed, 66% reported HWWS. Through the demonstration protocol, only 10 out of 319 school children, performed HWWS satisfactorily. The percentage of students who washed their hands at recommended times (30–60 sec) was 58%. This proportion increased by grade (from 34% among grade 1 to 67% among grade 7; $p<0.05$). Correlates of self-reported HWWS were more common in higher grades [grade 4 vs. grade 1: odds ratio (OR)=4.14 (2.00–8.56), grade 7 vs. grade 1: OR=7.76 (3.67–16.4)] and less common in ethnic minority groups [XaPhó vs. Kinh-Tay: OR=0.28 (0.11–0.70)]. All 20 homes of school children visited had soap and water but none of the six schools had soap for hand washing.

JirapornChmpikul, (2014) conducted a descriptive cross-sectional study about hand washing practice, the prevalence of proper hand washing, and related factors among sixth grade of elementary students in Selat sub-district, Indonesia. A self administered questionnaire was administered to 274 students at seven schools

randomly selected by proportion to size from five villages. Data were analyzed using descriptive statistics, Chi square tests, and multiple logistic regressions to explore associations between the various study factors (i.e. socio-demographic characteristics, attitudes, subjective norms, perceived control, and availability of facilities). Nine combinations of hand washing emerged from this study which combined washing hands by using water and soap with two critical events: before eating and after visiting the toilet. Only 40.5% of the respondents washed their hands properly. Availability of clean water (Adj OR = 4.24, 95% CI = 1.92-9.35) and soap (Adj OR = 5.55, 95% CI = 2.36-13.08) at hand washing stands were found to be significant predictors of proper hand washing, when adjusted with other factors.

Isaac Monney, OparebeaSussana, (2013) assessed the hand hygiene practices, barriers and compliance to proper hand hygiene in schools benefiting from the Ghana School Feeding Programme (GSFP). Quantitative and qualitative data were collected through the administration of structured questionnaires and extensive field observation respectively. Fifty three (53) GSFP beneficiary schools were selected from four different locations in Ghana; Winneba (6),Mpraeso (10), Mampong-Ashanti (17) and Bolgatanga (20). Findings from the study indicate availability of hand washing facilities (HWFs) in most schools (79%; n = 53); high pupil-to-HWF ratio resulting in poor hand washing practices (Range: 15-372; average: 105); availability of soap for hand washing (83%; n = 42) but extensive use of shared containers (53%; n = 42); delays in acquisition of HWFs, fragmented private sector efforts in hand hygiene promotion and non-compliance with conventional hand washing practices. The study observes that the incorporation of

schools into the GSFP without concurrently instituting a Comprehensive hand washing programme is rather a retrogressive step considering the possible health repercussions on pupils. To avert this, it is proposed that hand washing with soap should be a mandatory practice in schools benefiting from the GSFP. This requires institution of a sustainable, impact-driven school hand hygiene programme involving both public and private sector agencies to be instituted along with the GSFP.

Sae-Lim V, Lim LP, (2013) conducted a study to evaluate the effect of intensive education on self-reported frequency of hand washing (FHW), measured quality of hand washing (QHW), and measured scores of knowledge, attitude, and practice (KAP) after 7 days and 90 days home-based intensive education of participants (aged >7 years) in households with a influenza-positive child. The researchers provided intensive hand washing education using interactive participation including individual training, self-monitoring diary, provision of soap. Findings suggested that there were significant improvements on FHW and QHW on day 7, control group (n (1) = 135) reported 3.9 hand washing episodes/day, whereas the intervention group (n (2) = 140) reported 5.7 episodes/day; control group (n (1) = 164) obtained a 3.2 measured quality score, whereas the intervention group (n (2) = 166) obtained a score of 6.4. FHW significantly improved by 2episodes/day and QHW increased by scores/episode. Conclusions were drawn that knowledge of influenza and hand washing following coughing/sneezing showed significant improvement, but attitude modification toward severity of influenza requires a more intensified and longer intervention.

McGuckin, **(2012)** conducted a study in Karachi, Pakistan, study was to evaluate associations between hand washing promotion and child growth and development. A total sample of 461 children was enrolled in a trial of household-level hand washing promotion in 2006 and was younger than 8 years at reassessment in 2012. In 2006 neighbourhoods were randomized to control (n = 9), hand washing promotion (n = 9), or hand washing promotion and drinking water treatment (n = 10) intervention households received free soap and weekly hand washing promotion for 9 months. Anthropometrics and developmental quotients measured with the Battelle Developmental Inventory II at 5 to 7 years of age. The result of the study showed that 24.9% and 22.1% of children had z scores that were more than 2 SDs below the expected z scores for height and body mass index for age, respectively. Anthropometrics did not differ significantly across study groups. Global developmental quotients averaged 104.4, 95 among intervention children and 98.3 among control children (P = .04). Differences of similar magnitude were measured across adaptive, personal-social, communication, cognitive, and motor domains. Although growth was similar across groups, children randomized to the hand washing promotion during their first 30 months of age attained global developmental quotients 0.4 SDs greater than those of control children at 5 to 7 years of age. The study concluded and suggested that hand washing promotion could improve child well-being and societal productivity.

Jodrell.C.M, (2012) conducted a study to assess the effect of hand washing promotion with soap on the incidence of acute respiratory infection, impetigo, and diarrhoea. Results showed that children younger than 5 years in households that

received plain soap and hand washing promotion had 50% lower incidence of pneumonia than controls. Also compared with controls, children younger than 15 years in households with plain soap had a 53% lower incidence of diarrhoea and a 34% lower incidence of impetigo. Incidence of disease did not differ significantly between households given plain soap compared with those given antibacterial soap. The study interpreted that hand washing with soap prevents the two clinical syndromes that cause the largest number of childhood deaths globally-namely, diarrhea and acute lower respiratory infections.

Oyibo. P.G, (2012) did the study to assess the knowledge and practices of hand hygiene among school children aged 6-14 years in Abraka, Delta State, Nigeria. This is a school based cross-sectional descriptive study conducted from September 2011 to February 2012 among primary school children in Abraka selected by multistage sampling technique. The study instrument was a pre-tested structured interviewer administered questionnaire. The average knowledge and practice scores related to hand hygiene recorded among the school children studied were 74.6% and 54.9% respectively. This high level of knowledge related to hand hygiene exhibited by the children was not totally reflective of their practices of hand hygiene; as 29.4%, 37.0% and 46.3% of them washed their hands after using the toilet, wash their uniform daily and wash their hands after playing respectively. The result of physical inspection of the children revealed that 17.9%, 45.2% and 57.4% of them had dirty hair, dirty uniform and dirty nails respectively. This study proved that although a sizeable number of the children studied had adequate knowledge related to hand hygiene, their practices related to same were poor.

StuarTousman, PhD, Dani Arnold, MS, (2011) evaluated the Hand Washing Program for 2nd-GradersThe purpose of this study was to determine if a multiple-week learner-centered hand washing program could improve hand hygiene behaviors of 2nd-graders in a northern Illinois public school system. Volunteers from the Rockford Hand Washing Coalition went into 19 different classrooms for 4 consecutive weeks and taught a learner-centered program. The program consisted of interactive class discussions and activities using Glitter Bug training devices and agar plate materials. A one-factor repeated measure analysis of variance indicated a statistically significant 34% decrease in the absenteeism rate for students in the intervention group. Chi-square analyses on agar plate data indicated that students had cleaner hands after washing. Qualitative data from parents and teachers indicated that a majority of the students were engaging in hand-washing behavior. These results indicate that integrating a learner-centered interactive program in a multiple-week structure can lead to improvement in hand hygiene behavior.

M. Steiner-Asiedu, S.E. Van-Ess, (2011) carried out a study to determine the hand washing practices among children in private and public school in theMetropolis in the Greater-Accra region of Ghana, with both private and public schools. A total of 295 schoolchildren were randomly recruited into the study. The study was cross-sectional in design and used qualitative and quantitative methods to collect data. A questionnaire was used to obtain information on socio demographics. A check list was used during the observation of hand washing practices and an interview guide was used for the focus group discussions. The results showed that, most school children observed did not practice proper hand washing with soap, both

in school and at home due to the unavailability and inaccessibility of hand washing facilities such as soap, towel and clean running water. However, majority (90.2%) of those who used the school toilet practiced hand washing with soap after defecation. Private schools were found to be 63% ($p = 0.02$) less likely to wash their hands after using the toilet, 51% ($p = 0.03$) less likely to wash their hands before eating and 77% ($p<0.001$) less likely to wash their hands with soap after eating compared to their public school counterparts. Parents reported the presence of hand washing facilities at home but structured observations during home visits proved otherwise. The need to extend the hand washing campaigns to private schools cannot be over emphasized. This union will foster stronger linkages that will pave the way for educating and monitoring the school children for effective hand washing practices.

Al-Jundi SH, Al-Waeili H, (2011) explored the effect of a soap promotion and hygiene education campaign on hand washing behaviour in rural India. The objective of the study was to investigate the effectiveness of a hygiene promotion intervention based on germ awareness in increasing hand washing with soap on key occasions (after faecal contact and before eating) in rural Indian households. The methods used were Cluster randomised trial of a hygiene promotion intervention in five intervention and five control villages. Hand washing was assessed through structured observation in a random sample of 30 households per village. Additionally, soap use was monitored in a sub-sample of 10 households per village using electronic motion detectors embedded in soap bars. The results of the study stated that the intervention reached 40% of the target population. Germ awareness increased as well as reported hand washing. Observed hand washing with soap on

key occasions was rare (6%), especially after faecal contact (2%). Data from motion detectors indicated a significant but small increase in overall soap use in the intervention arm. The study concluded that the intervention proved scalable and effective in raising hygiene awareness.

James H.stark MPH, (2011) did the observational study to measure how the improper use of gloves limits compliance to hand hygiene and exposes patient's to infection in five wards in a French university hospital. Staff-patient and staff-environment contacts were observed in 120 healthcare workers caring for patients colonised or infected with pathogenic bacteria. Hand hygiene was not undertaken due to improper gloving in 64.4% (95% CI, 64.1% to 65.1%) of instances. Possible microbial transmission might have occurred in 18.3% (95% CI, 17.8% to 18.8%) of all contacts because used gloves were not removed before performing care activities that necessitated strict aseptic precautions. The study concluded that improving hand hygiene compliance will require changing healthcare workers behaviour towards glove use.

2. Review of literature related to educational interventions among school children regarding hand washing.

Mohamed Moussa1, Nabila Hassan Ali Abdella, (2015) stated that hand washing with soap has been viewed as one of the most cost-effective ways of reducing the global infectious disease burden. Proper hand washing technique is easy to learn and can significantly reduce the spread of infectious diseases among children. Aim of the study was conducted to evaluate the effectiveness of a training

program on improving the hand washing among children in primary schools. Quasi experimental design was used in the study. The data was collected from 450 students, aged 6 to 12 years. The study data were collected by a self-administered questionnaire sheet and observation checklist, the field data was collected in Port Said city elementary schools in six months periods. The study concluded that there were highly significant statistical differences in total knowledge and practice score of the studied sample after implementation of educational program. Based on the findings of the current study, it is concluded that, the hand washing practices of children in primary schools was improved after the program implementation.

Rubanprem Kumar, Sasikala M, (2014) conducted a study to identify the effectiveness of hand hygiene teaching on knowledge and compliance of hand washing among the students at a selected school in Mugalivakkam village, Kancheepuram District. Quantitative quasi experimental randomized one group pretest and posttest design study was carried out to find out the effectiveness of hand hygiene teaching on knowledge, compliance and to correlate the level of hand hygiene knowledge with compliance of hand washing among the students. The knowledge was assessed by questionnaire and compliance was assessed by sterile hand swab collection to do bacteriological culture test in the microbiology laboratory. Among six primary schools in the Mugallivakkam village at Kancheepuram District one primary school was selected using simple lottery method. Five students from 2nd, 3rd, 4th and 5th standard were selected using simple random sampling. The total sample size was 20. The period of data collection was from 16-6-2012 to 13-7-2012. The 20 primary school students were split into four subgroups of

each consisting of five school children. Then teaching programme on hand hygiene was given using laptop. Posttest was conducted on knowledge and compliance after three weeks. The mean value of knowledge between the pretest and posttest showed a vast statistically significant difference at $p<0.001$ level and there was a extremely important difference in the mean score of the various pathogens in the hand flora which was estimated to assess the compliance indicators to hand hygiene between the pretest and posttest at $p<0.001$ level. This study imposes importance of suitable health teaching intervention through proper structure to the school children, for enhancement concerning hand hygiene among them, all over the country.

Pete, (2014) did a survey to assess the effectiveness of hand washing behavior with soap in Kenya. The overall objective of this study was to carry out a baseline survey on hand washing with soap in the community and in the school environment in urban and rural areas. Secondary and primary research methods were utilized. It was executed at two levels, community and schools. The school setting targeted children in primary school. This approach sought to understand hand washing behavior in schools. Structured observations are done before and after soap placement. It involved observing hand washing behavior after using the toilet, focus group discussions were held with children to understand their way of life, perception of dirt, and attitudes towards hand washing. Conclusions were drawn that hand washing behavior with only water was practiced, especially after contact with stool, adoption of soap in hand washing needs to be scaled up, level of hand washing for primary school children after defecation in school was lower than at home. Soap and water availability were key facilitators. The presence of soap at the hand washing site

is of critical importance. Washing hands with soap takes a lower priority in the hygiene practice in most of the school children.

Leppanen K A, (2014) conducted a longitudinal study to determine the effectiveness of an instructional program on hand washing. The hypothesis stated that an instructional program on germs and hand washing in child care could significantly reduce the spread of infectious diseases in the test centre. A longitudinal study was conducted in a field setting with a test group and a control group of 3- to 5-year-old children and their teachers in two similar child care settings. For 21 weeks illnesses and symptoms of infectious diseases were assessed with a health assessment checklist. The test group received a developmentally appropriate instructional program on germs and hand washing. The teachers in the test group attended workshops on infectious diseases and hand washing. The control group maintained their usual hand washing procedures. The study result showed that at weeks 1 through 11 data were collected. At weeks 12 through 21, peak cold and flu season, the test group had significantly fewer colds than the control group. Hand washing helped to reduce colds at the test centres where proper and frequent hand washing practices were practiced and incorporated into the curriculum through an intervention program.

HerotovaTK.Benes J, (2013) did a cross-sectional study was conducted in two hospitals in Hanoi, Vietnam to describe knowledge and attitude as well as compliance of hand hygiene (HH) and to explain the relationship among knowledge and attitude towards HH compliance among healthcare workers (HCWs). Data was collected using both observational form and questionnaire. The results showed that

the knowledge score on HH of participants was good; but some gaps remained. The participants' attitude towards HH was positive. The self-reported HH compliance was high, however, the actual HH compliance resulted from observational phase was much lower (81.82% vs. 43.76%). The compliance was affected by the distance from the basin to patient room (distance), week end hand rubs availability, the placement of hand rubs, risk level of HH opportunities and the type of HCWs. These study results provided important evidences of HH compliance and suggested that suitable interventions could be applied to improve HH compliance in the Vietnamese context.

Chiittle, Nicolson Alexander, (2013) examined the reach, dose, fidelity, acceptability, and sustainability of the implementation of an educational hand washing intervention in primary schools, and to explore views regarding acceptability and sustainability of the intervention. Process evaluation within a cluster randomized controlled trial, including focus groups with pupil aged 6 to 11, semi-structured interviews with teachers and external staff who coordinated the intervention delivery, and school reports and direct observations of the intervention delivery. The educational package was delivered in 61.4% of schools (85.2% of intervention schools, 37.8% of control schools following completion of the trial). Teachers and pupils reacted positively to the intervention, although concerns were raised about the age-appropriateness of the resources. Teachers adapted the resources to suit their school setting and pupils. Staff coordinating the intervention delivery had limited capacity to follow up and respond to schools. The hand washing intervention was acceptable to schools, but its reach outside of a randomized trial, evidenced in

the low proportion of schools in the control arm who received it after the trial had ended, suggests that the model of delivery may not be sustainable.

Ashutosh Shrestha and Mubashir Angolkar, (2013) highlighted that millions of lives could be saved through simple and proper hand washing and educational interventions which are cost effective in developing world. There are marked changes in hand washing behaviour among school children after health education intervention at schools. To improve hand washing knowledge and practice among school children through health education intervention. Out of 7 schools Government Urdu Primary School was selected by Simple Random Sampling. All of students of grade 3rd, 4th and 5th were included. Baseline and end line survey was done in February, 2013 and September, 2013.Health education sessions were conducted once a week for six weeks. Paired t test, McNemar test and proportions were calculated. Ethical clearance and informed consent was obtained. The mean knowledge score of personal hygiene was 53.86 which increased to 77.54 after health education intervention, which was statistically significant at paired t 5.17, df 6 and $p<0.01$. The mean practice score of personal hygiene was 41.43 which increased to 60.87 after health education intervention. The increase in correct practice was statistically significant at paired t 7.52, df 8, and $p<0.001$. The change in behaviour of school children was possible if the health education intervention is properly implemented.

Frujeri Mde L, (2013) conducted a study to evaluate school-based hygiene and water treatment programs to increase student knowledge, improve hygiene, and decrease absenteeism. Baseline information was collected from students in 42

schools in Kenya. They instituted a curriculum on safe water and hand hygiene and installed water stations in half ("intervention schools"). One year later, they implemented the intervention in remaining schools. Through biweekly student household visits and two annual surveys, researchers compared the effect of the intervention on hygiene practices and reported student illness. Result showed that improvement in proper hand washing techniques after the school program was introduced and showed a decrease in the median percentage of students with acute respiratory illness among those exposed to the program; no decrease in acute diarrhoea was seen. Students in this school program exhibited sustained improvement in hygiene knowledge and a decreased risk of respiratory infections after the intervention.

Costa ED Jr.Dent Traumatol, (2013) did an experimental study at elementary schools in Denmark. The aim of the study was to evaluate an intervention to reduce student absenteeism through increased hand hygiene. The experimental school included 324 pupils aged 5-14 years. The intervention included one lesson in hand disinfection theory and practice and directed to disinfect their hands using ethanol gel three times throughout the school day. Over the three months of the intervention, this measure resulted in a 66 %decrease in pupils with four or more days of absence and a 20 %increase in children with zero absences. In the Control School, however, which had been the intervention school the prior year in hand washing, no significant changes were noted between 2012 and 2013. Results strongly suggested that even with low participation rates (20% in 2012 and 21% in 2013) and the passage of time,

merely increasing hand hygiene education can have a long term, significant impact on the spread of infection.

Nelson Roy, Kristine Tanner, (2013) did a cross-sectional study was conducted to evaluate the knowledge, attitudes, and practices (KAP) of hygiene among rural primary school children in Ethiopia. Study sample comprised of 669, 1-6 grade primary school students. Data consisted of hygiene and hand washing practices, knowledge about sanitation, personal hygiene characteristics, and presence of gastrointestinal parasitic infection. Results of the study stated that approximately 52% of students were classified as having adequate knowledge of proper hygiene. Most students reported hand washing before meals (99.0%), but only 36.2% reported using soap. Although 76.7% of students reported that washing hands after defecation was important, only 14.8% reported actually following this practice. Study findings stressed the need for more hand washing and hygiene education in schools.

David Brewster, (2012) stated that there is clear and strong evidence of effect of education and hand washing with soap in preventing diarrheal disease among children (consistent effect in four studies). In the largest well-designed study, children living in households that received plain soap and encouragement to wash their hands had a 53% lower incidence of diarrhoea (95% CI, 0.35, and 0.59). There is some evidence of an effect of education and other hygiene behaviour change interventions (six studies), as well as the provision of water supply, sanitation and hygiene education (two studies) on reducing rates of diarrheal disease. The size of these effects is small and the quality of the studies generally poor.

Anna Bowen, Huilai Ma, (2012)preformed a cluster-randomized controlled trial evaluating the effect of a hand washing-promotion program in Chinese primary schools intensive hand washing promotion can reduce diarrheal and respiratory disease incidence. To determine whether less intensive, more scalable interventions can improve health, we evaluated a school-based hand washing program. We randomized 87 Chinese schools to usual practices: standard intervention (hand washing program) or expanded intervention (hand washing program, soap for school sinks, and peer hygiene monitors). We compared student absence rates, adjusting for cluster design. In control schools, children experienced a median 2.0episodes (median 2.6 days) of absence per 100 student-weeks. In standard intervention schools, there were a median 1.2 episodes (*P* _ 0.08) and 1.9 days (*P* _ 0.14) of absence per 100 student-weeks. Children in expanded intervention schools experienced a median 1.2 episodes (*P* _ 0.03) and 1.2 days (*P* _ 0.03) of absence per 100 student-weeks. Provision of a large-scale hand washing promotion program and soap was associated with significantly reduced absenteeism. Similar programs could improve the health of children worldwide.

Ehizele A, Chiwuzie j, (2012) conducted a study to develop and evaluate a program to teach 13, Grade 1 children with disabilities, about hand washing at Glenrose School, which is located within Glenrose Rehabilitation Hospital, Texas, USA. Children aged 6 to 8 years were taught how and when to wash their hands. Hand washing skills were evaluated before the teaching began, immediately following the teaching program, and at 1, 3, and 5 months post-teaching. The children's hand washing skills did improve, with the girls generally scoring

higher than the boys on both washing techniques and times of washing on all the testing occasions. Although the children had fewer visits to the doctor, took fewer prescribed antibiotics, and had fewer infectious illnesses than they did for the same time period the previous year, other variables, in addition to the teaching program, may have contributed to the outcome. A revised hand washing program is now included in the Grade 1 curriculum.

Petersen PE, (2012), evaluated the hand hygiene behaviour of 400 middle school students (grades 1-3) in Seoul and Gyeonggi - Do. The objective of the study was to determine how stages of change were affected by food safety education, focusing on hand hygiene and general food safety. Subjects were 51.3% male and 44.3% of study subjects were first graders of middle school. Approximately 40% of subjects were at the stage of action, 42.7% were at the stage of contemplation, and 16.4% were at pre-contemplation. The most important factor that influenced proper hand washing was self efficacy. Proper hand washing was also correlated significantly with positive belief and stages of change. After food safety education by high-school mentors, middle-school students who were in the stages of pre-contemplation (11.1%) and contemplation (88.9%) showed significant progression toward the action stage. the study concluded that proper hand washing and food safety knowledge were also significantly increased after educational intervention.

Ward billhimer, (2012) did a study in department of paediatrics, National University Hospital, Taiwan to evaluate the effects of hand hygiene program on nurses and physicians for prevention of noso-comial infections in neonatal intensive care unit. The campaign for hand hygiene promotion was conducted consists of

covert observations and regular group feedback on compliance. Overall compliance increased from 43% to 80% during the promotion programme and the noso-comial infections reduced from 15.13 to 10.69 %. The study highlighted need for regular survey and feedback on hand hygiene in reduction of noso-comial infection.

According to the mayo clinic, (2011) it is stated that frequent hand washing is one of the best ways to avoid getting sick and spreading illness. Good hand washing protects against the common cold, which is responsible for 22 million lost school days each year, as well as more serious illness such as meningitis, flu, hepatitis and most type of infectious diarrhoea. A study of 305 school children found that children who washed their hands four times a day had 24% fewer sick days due to respiratory illness and 51% fewer days due to upset stomach. Proper hand hygiene is especially important for preschool age children who are frequently in close contact with other children on a daily basis.

W.H.Au, L.K.P. Suen, (2010)conducted a study to evaluate the effectiveness of a structured programme on hand washing which has taken into account of the developmental stage of children. A study is using a structured hand washing programme as intervention. The intervention group (n=15) receives the structured education programme on hand washing in addition to their existing curriculum, whereas the control group (n=15) receives only the teaching content of their curriculum. The programme contains five teaching sessions delivered on a weekly basis. Storytelling, health education, games, experiments, and hands-on activities are planned. Outcome evaluations include the knowledge level and behaviours on hand washing. The behaviour compliance over time is also assessed after the programme.

After the education programme, the knowledge level of students in both groups increased, but significant improvement in hand washing practice is observed only in the intervention group. A noticeable improvement in the hand washing practice of the experimental group is seen immediately after the programme, but the children seem to have difficulties in maintaining the habit.

Gaby Judha, Roberthunge, (2010) did a study to determine their effectiveness at increasing hand washing with soap in a natural setting. We installed wireless devices in highway service station restrooms to record entry and soap use. Two text-only messages for each of 7 psychological domains were compared for their effect on soap-use rates. We collected data on nearly 200000 restroom uses. The knowledge activation domain was most effective for women, with a relative increase in soap use of 9.4% compared with the control condition ($P = .001$). For men, disgust was the most effective, increasing soap use by 9.8% ($P = .001$). Disgust was not significantly better than the control condition for women, nor was knowledge activation for men. Messages based on social norms and social status is effective for both genders. Our data show that unobtrusive observation of behavior in a natural setting can help identify the most effective interventions for changing behaviors of public health importance. The gender differences indicate that public health interventions should target men and women differently.

CONCEPTUAL FRAME WORK

The conceptual frame work deals with the interrelated concepts that assembled together in some relational schemes by virtue of relevance to a common theme.

The conceptual framework of the present study is modified Dorothy Johnson's (1980) open system theory.

According to the general system theory a system consists of a set of interacting components that are regulated by biological, psychological and sociological factors. An individual composed of open and interactive subsystem. An open system consists of input, throughput and output.

According to the theorist view the information, matter and energy that the system receives from the environment are called as input for the system. The system uses, organizes transforms the input in a process called as throughput and releases information, matter and energy as output into the environment. Output that returns to the system as input is called as feedback.

In this study VI and VII school children are the persons, has an open and interactive subsystems.

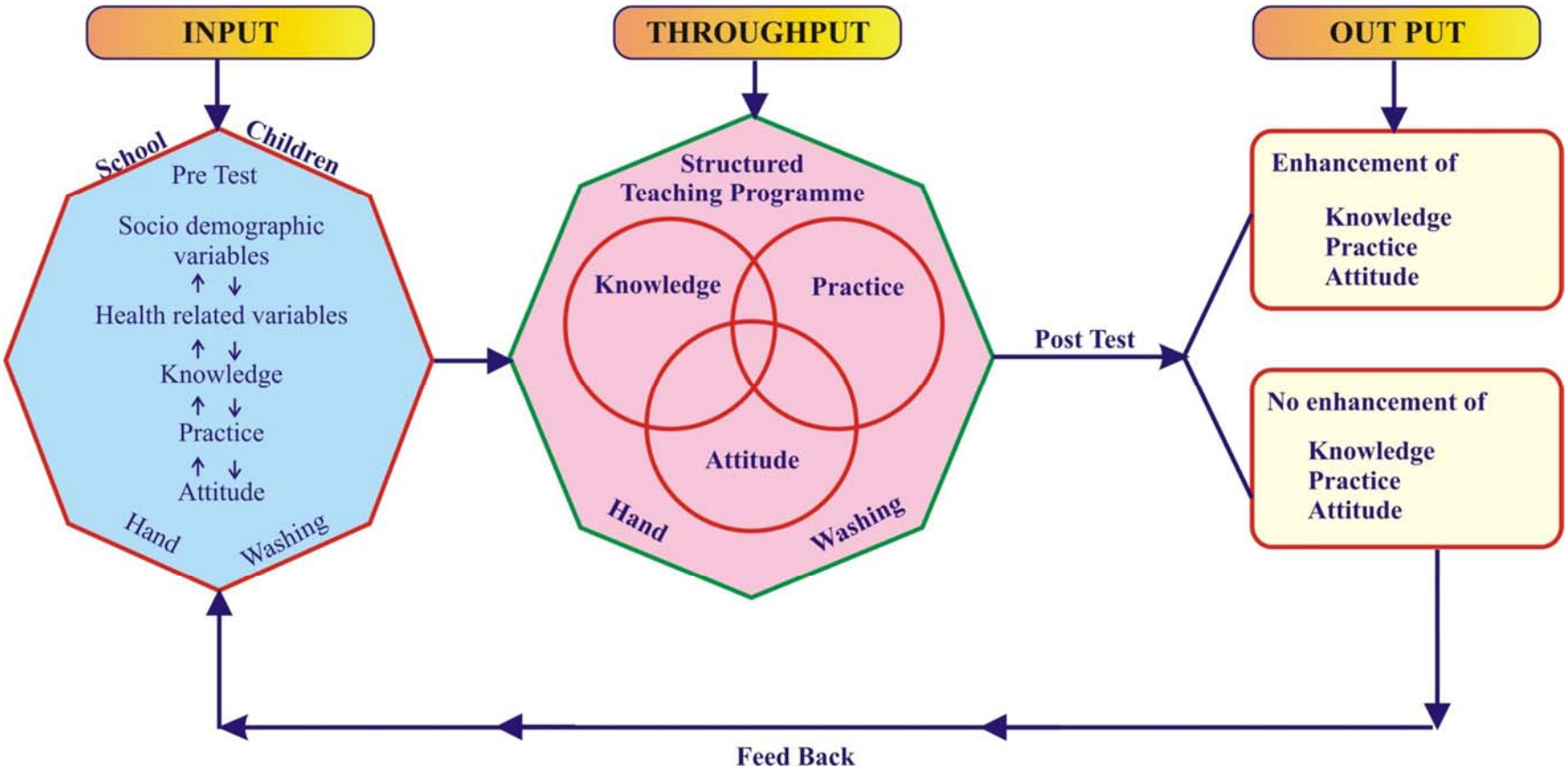

Figure No: 1 Conceptual framework on modified Dorothy Johnson's open system theory (1980)

Input

The school children as an open system they continually strive to maintain a steady state. The school children has knowledge, practice and attitude regarding hand washing and was assessed by structured multiple choice questions, observation checklist and modified likert attitude scale.

Through put

Through put is activity phase or manipulation phase. The school children are imparted knowledge by structured teaching program regarding hand washing. During this phase transformation of knowledge, practice and attitude regarding hand washing takes place.

Output

Output refers to the outcome that has occurred as result of transformation during throughput. The post test was done to assess the knowledge, practice and attitude regarding hand washing among school children. The structured teaching programme is an effective method to impart knowledge and create impact in the practice and attitude regarding hand washing.

CHAPTER - III

METHODOLOGY

This chapter deals with the structured frame work to conduct this study. It encompasses research approach, research design, settings, population, sample, criteria, sampling technique, description of the tool, validity and reliability of the tool, pilot study, data collection procedure, plan for data analysis.

RESEARCH APPROACH

A quantitative research approach was used for this study.

RESERACH DESIGN

A pre experimental one group pre and post-test design was chosen.

TABLE – 1

SCHEMATIC REPRESENTATION OF RESEARCH DESIGN

Group	Pre-test	Intervention	Post-test
study group	O_1	X	O_2

Keys

O_1 - Pre test on knowledge, practice and attitude regarding hand washing.

X - Intervention-Structured teaching programme regarding hand washing among school children

O_2 - Post test on knowledge, practice and attitude regarding hand washing.

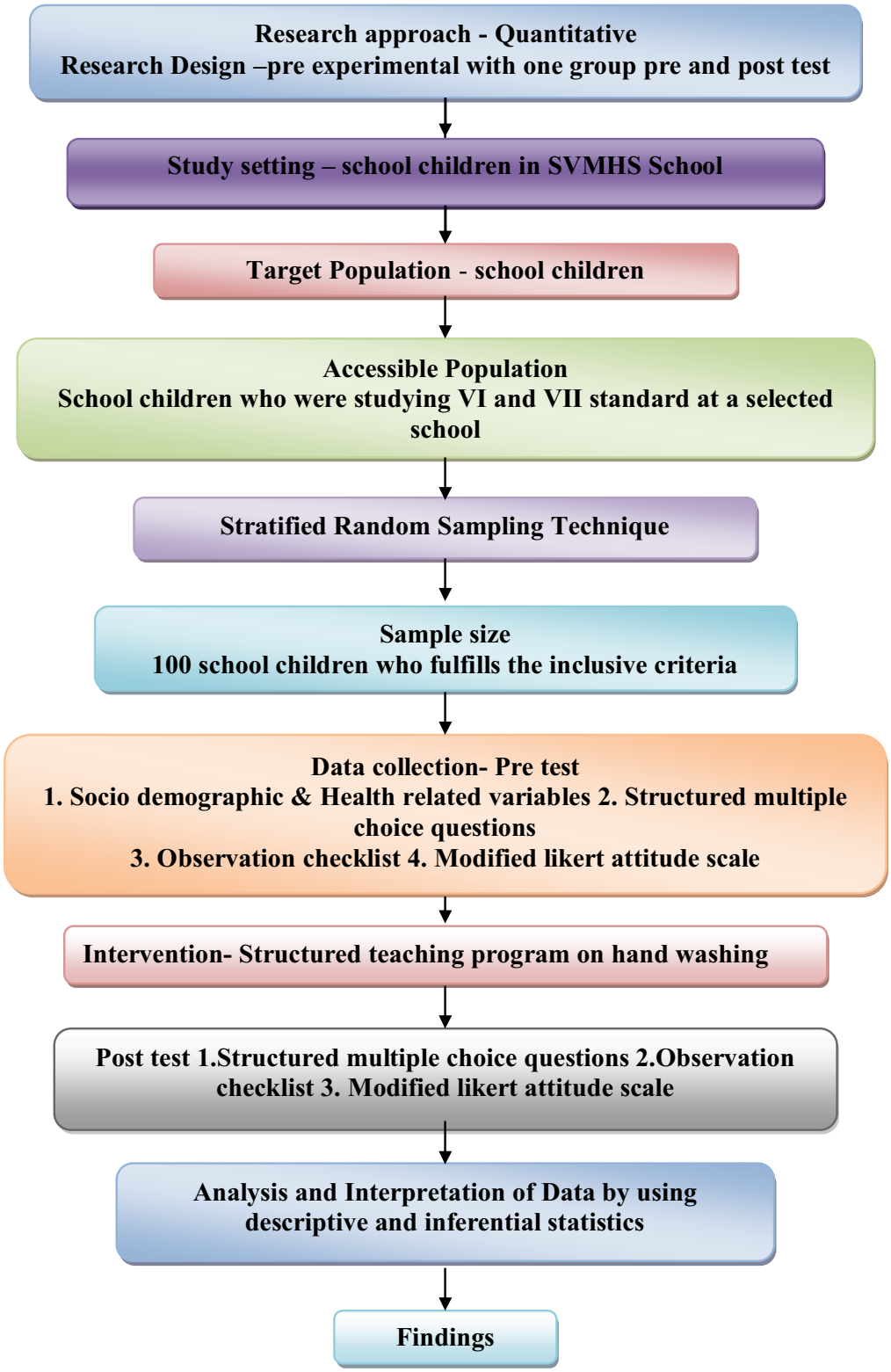

Figure 2: Schematic Representation of Research Methodology

VARIABLES

INDEPENDENT VARIABLE

In this study independent variable was structured teaching programme regarding hand washing.

DEPENTENT VARIABLE

In this study dependent variables were knowledge, attitude and practice regarding hand washing technique among VI and VII standard school children.

SETTING OF THE STUDY

The study was conducted among school students aged between 10-12 years in SVMHS School studying VI and VII standard. The school was located at Serkadu rural area in Vellore district. The school comprises of classes starting from kindergarten to 12^{th} standard. Each class had three sections and has both boys and girls. There were 110 teachers working in this school. The school follows matriculation syllabus. Total strength of the student in the school was 1108 and out of which 174 students from VI and VII standard were included for the study. A total of 50 boys and 50 girls were selected for this study by adapting stratified random sampling technique.

The working hour is from 9am to 4pm with a lunch break of 30minutes from 12.30pm to 1pm. The school remain closed on all second Saturdays, Sundays and all government holidays.

POPULATION

TARGET POPULATION

It refers to school children who were studying VI and VII standard.

ACCESSIBLE POPULATION

It refers to school children who were studying VI or VII standard at SVMHS School, Serkadu in Vellore district.

SAMPLE

In this study the sample comprised of school children who fulfilled the inclusive criteria at SVMHS School, Serkadu in Vellore district.

SAMPLING TECHNIQUE

A stratified random sampling technique was adopted.

SAMPLE SIZE

A sample of 100 School children who were studying VI or VII standard at SVMHS School, Serkadu in Vellore district and who fulfilled the inclusion criteria were chosen for this study.

Method of sample selection

The school children who met the inclusion criteria were selected for this study. Boys and girls from VI and VII standard from section A and B were selected. Each standard and section was considered as a stratum and from each stratum the

student was selected by using stratified random sampling technique by using the attendance register numbers. Each individual number was written in small equal chits and they were folded and then they were shuffled well. Then one by one the numbers were selected for the sample. This method was adopted for two stratums as follows:

S.NO	STANDARD	POPULATION		SAMPLE	
		Boys	Girls	Boys	Girls
1	VI standard	45	40	25	25
2	VII standard	46	43	25	25

CRITERIA FOR SAMPLE SELECTION

Inclusion criteria

1. All the school children who were studying VI and VII standard at SVMHS School.
2. Children who were aged between 10 to 12 years.
3. Children who were able to speak read and write Tamil and English.

Exclusion criteria

1. Children who were not willing to participate in this study.
2. School children who were on leave.

SELECTION AND DEVELOPMENT OF THE STUDY INSTRUMENT

The researcher constructed the tool based on the literature review and opinion from experts which consisted of

Part-I: Section-A: socio demographic variables, Section- B: Health related variables

Part-II: Section-A structured multiple choice questions to assess the knowledge on hand washing, Section- B Observation checklist to assess the practice on hand washing, Section- C Modified likert attitude scale to assess the attitude of school children on hand washing.

Part-III: Structured teaching on hand washing.

DESCRIPTION OF THE TOOL

The tool for this study consists of three parts.

PART- I

SECTION: A- SOCIO DEMOGRAPHIC VARIABLES

The demographic variables consisted of ten items which included age of the children, gender, domicile, educational status of father, educational status of mother, occupational status of the father, occupational status of the mother, family income per month, type of family and number of siblings.

SECTION: B - HEALTH RELATED VARIABLES

It consisted of five items which included sources of water supply, nature of drainage, toilet practice, pet animal and previous source of knowledge.

PART- II: STRUCTURED QUESTIONNAIRE

SECTION: A

It consisted of two parts,

Part- I included nine structured multiple choice questions in general information about hand washing.

Part- II included six structured multiple choice questions related to significance of hand washing. A total of fifteen multiple choice questions were used to assess the level of knowledge regarding hand washing among school children in pre and post test. The questions were constricted relevant to definition, importance, indications, general steps and consequences of poor hand washing.

SECTION- B

It consisted of observation checklist to assess the practice of hand washing. The nine items were included in the check list, based on the steps of hand washing.

SECTION- C

It consisted of modified likert three point attitude scale to assess the attitude of hand washing which composed of 20 items which included both positive and negative statements.

PART- III

It consisted of structured teaching programme on hand washing which included definition, importance, indications for hand washing, general steps of hand washing and consequences of poor hand washing. The lecture cum demonstration methods was adopted and visual aids like roller board, chart, banner and pamphlet were used.

SCORE INTERPRETATION

PART- I

The numerical values were assigned for the socio demographic and health related variables.

PART- II

SECTION-A

It consisted of 15 self administered multiple choice questions regarding general information about hand washing and significance of hand washing. The correct and wrong answer was given one and zero respectively. The maximum total score was fifteen.

The total score were computed and categorised as follows.

Category	Level of knowledge in percentage
<50%	Inadequate knowledge
51 – 75%	Moderately adequate knowledge
>75%	Adequate knowledge

SECTION-B

It consisted of observation check list which contains ten items and it has a minimum score of '9' and maximum of '18'. A score were interpreted as follows;

14- 17 : Excellent practice

10-13 : Good practice

1-9 : Poor practice.

SECTION- C

It consisted of self administered modified likert three point scale. It included both positive and negative statement. The scores assigned were as follows;

Positive statement: Disagree- 1, Uncertain- 2 and Agree-3

Negative statement: Disagree- 3, Uncertain- 2 and Agree- 1.

CONTENT VALIDITY

The content validity of the tool was established by experts comprised of nursing and medical experts. The experts were requested to give their opinion and suggestion regarding the relevance of the tool for further modification to improve the clarity and content of the items and modification was done accordingly. The tool was finalized and translated in Tamil by the investigator.

RELIABILITY OF THE TOOL

The reliability of structured multiple choice questions, observation checklist and modified likert attitude scale were elicited by using test retest method. The "r" value was computed by karls person's correlation coefficient formula and it was found to be 0.95, which indicated that the tool was highly reliable.

PILOT STUDY

A pilot study is a study which is carried out at the end of the planning phase of research in order to explore the feasibility of the study. A pilot study was conducted from 16.06.2015 to 25.06.2015 at Rishi Matriculation Hr. Sec School, vellore district. Administrative approval was obtained from the principal of the school to conduct the pilot study. The purpose of pilot study was to:

- Evaluate the effectiveness of structured teaching programme.
- Find out the feasibility of conducting the final study.
- Determine the methods of data analysis.

A total of 10 school children were selected for the study by using stratified random sampling technique on 16th June 2015 and pre test was conducted by using structured knowledge questionnaire, observation checklist and attitude scale. On the third day structured teaching programme was implemented to the school children who were included for the study. Post-test was conducted on 24th June 2015 after seven days of the administration of the structured teaching programme.

DATA COLLECTION PROCEDURE

The data collection procedure included the following steps through the study.

1. Collection of socio demographic variables and health related variables by self administered questionnaire.

2. Conduct of pre test by self administered multiple choice questions, observation checklist and self administered modified three points liket scale.

3. Administration of structured teaching programme.

4. Conduct of post test by self administered multiple choice questions, observation checklist and self administered modified three point likert scale.

The written permission was obtained from the authority of SVMHS School at Serkadu, Vellore district. The data collection was done for the main study from 1-07-2015 to 14-07-2015.The participants for main study were selected by stratified random sampling technique among school children in the SVMHS School children at Serkadu, Vellore district. Totally 100 school children were selected who fulfilled the inclusive criteria by lottery method. They were divided into four batches and each batch consisted of 25 children. Every batch (25 children) was given structured teaching programme on hand washing on different days. Before giving the intervention the investigator conducted pre-test for study group as per the data collection schedule. From the day of intervention the investigator took eight days on

an average to conduct post test which was done by using same tool to assess the level of knowledge, practice and attitude regarding hand washing among school children.

Data collection schedule

Standard	Batch	Pre test		Intervention		Post test	
		Date	**Time**	**Date**	**Time**	**Date**	**Time**
VI Standard	I Batch 1- 25	1.07.2015	10.30am to 11.30am	1.07.2015	2.30pm to 3.30pm	9.07.2015	10.30am to 11.30am
	II Batch 26- 50	2.07.2015	10.30am to 11.30am	2.07.2015	2.30pm to 3.30pm	10.07.2015	10.30am to 11.30am
VII Standard	III Batch 51- 75	3.07.2015	10.30am to 11.30am	3.07.2015	2.30pm to 3.30pm	13.07.2015	10.30am to 11.30am
	IV Batch 76- 100	4.07.2015	10.30am to 11.30am	4.07.2015	2.30pm to 3.30pm	14.07.2015	10.30am to 11.30am

TABLE – 2

PLAN FOR DATA ANALYSIS

The data analysis was done by using descriptive and inferential statistics. The plan for data analysis was as follow:

S.NO	DATA ANALYSIS	STATISTICAL TEST	OBJECTIVES
1	Descriptive statistics	Frequency / percentage, mean, standard deviation	• Frequency and percentage distribution of socio demographic variables, health related variables, level of knowledge, practice and attitude regarding hand washing among study group.
2	Inferential statistics	Paired "t" test Chi-square test	• Comparison of pre and post-test knowledge, practice and attitude regarding hand washing among school children. • Association of selected socio demographic variables and health related variables with level of knowledge, practice and attitude regarding hand washing among school children.

CHAPTER- IV

DATA ANALYSIS AND INTERPRETATION

This chapter deals with the statistical analysis of the data which enables the researcher to summarize, organize, evaluate, interpret and communicate the numerical information.

The descriptive and inferential statistics were used to analyze the data to evaluate the effectiveness of structured teaching programme on hand washing among school children. As per the objectives of the study the tables were organized.

SECTION-A

Distribution of socio demographic variables, health related variables among school children.

SECTION-B

Distribution of level of knowledge, practice and attitude on hand washing among school children in pre and post test.

SECTION-C

Comparison of pre and post test knowledge, practice and attitude scores on hand washing among school children.

SECTION-D

Association of socio demographic variables and health related variables with the level of knowledge, practice and attitude on hand washing among school children.

SECTION-A

Table-3

Distribution of socio demographic variables among school children

N=100

S.No	Socio demographic Variables		No	%
1.	Age in years	10.1 – 11	50	50.0
		11.1 – 12	50	50.0
2.	Gender	Male	50	50.0
		Female	50	50.0
3.	Domicile	Urban	38	38.0
		Rural	62	62.0
4.	Educational status of father	Literate	5	5.0
		Primary school	10	10.0
		High school	35	35.0
		Higher secondary school	40	40.0
		Others	10	10.0
5.	Educational status of mother	Literate	15	15.0
		Primary school	26	26.0
		High school	39	39.0
		Higher secondary school	10	10.0
		Others	10	10.0
6.	Occupational status of father	Labour	47	47.0
		Agriculture	30	30.0
		Government employee	10	10.0
		Business and others	13	13.0
7.	Occupational status of mother	Home maker	67	67.0
		Agriculture	23	23.0
		Government employee	5	5.0
		Business and others	5	5.0
8.	Family income per month	Below Rs. 5000/-	37	37.0
		Rs. 5001 to 10000/-	55	55.0
		Rs. 10001 to 15000/-	5	5.0
		Rs. 15001 and above	3	3.0
9.	Type of family	Nuclear	55	55.0
		Joint	34	34.0
		Extended	11	11.0
10.	No of siblings	One	10	10.0
		Two	52	52.0
		Three	25	25.0
		Four and above	13	13.0

The table 3 depicts that out of 100 children, each 50(50%) participants was aged between 10.1 – 11 and 11.1-12 years. With regard to the gender of the children 50(50%) were male, 50(50%) were female. Most of the 62(62%) had their residence in rural and 38(38%) were in urban area.

The distribution of educational status of father revealed that 40(40%) had higher secondary school education, 35(35%) had high school education, 10(10%) had primary and other education, and 5(5%) were literate.

The distribution of educational status of mother revealed that 39(39%) and 26(26%) had high school education and primary school education respectively.

Occupational status of father revealed that 47(47%) were labour, 30(30%) were in agriculture, 13(13%) were doing business and others and 10(10%) were government employees. Occupational status of mother revealed that most of the 67(67%) were homemakers, 23(23%) were in agriculture, 5(5%) were government employees.

Regarding family income per month it was found that 55(55%) of them had between Rs. 5001 to Rs. 10000/-, 37(37%) of them had below Rs. 5000/-, only 5(5%) had between Rs. 10001 to Rs. 15000/-.

About type of family out of 100children, 55(55%) of them belong to nuclear family, 34(34%) were in joint family and 11(11%) in extended type of family. With regard of number of sibling 52(52%) had two siblings, 25(25%) had three sibling, 13(13%) had four and above and 10(10%) had one sibling.

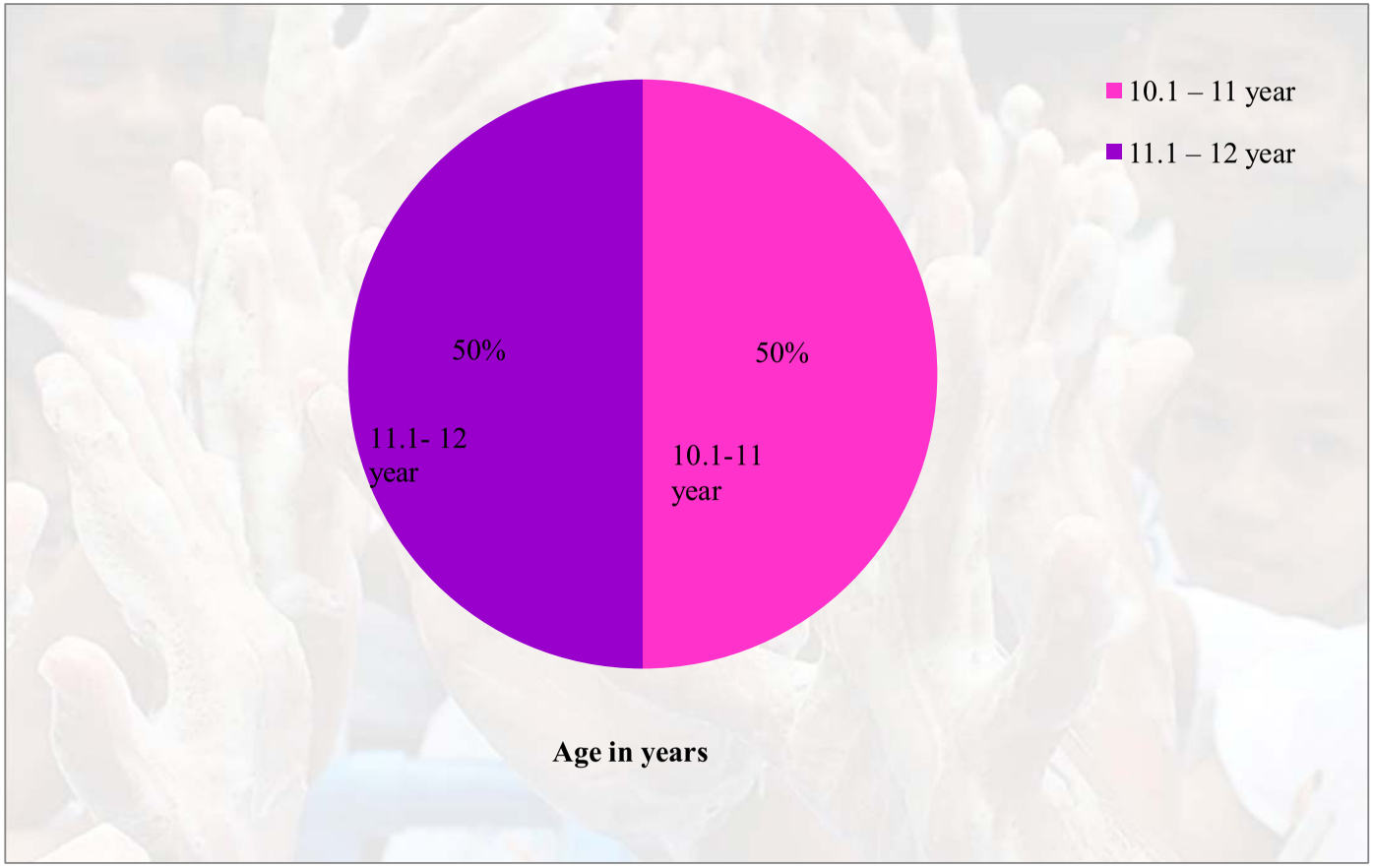

Fig No: 3 Percentage distribution of age in years among school children

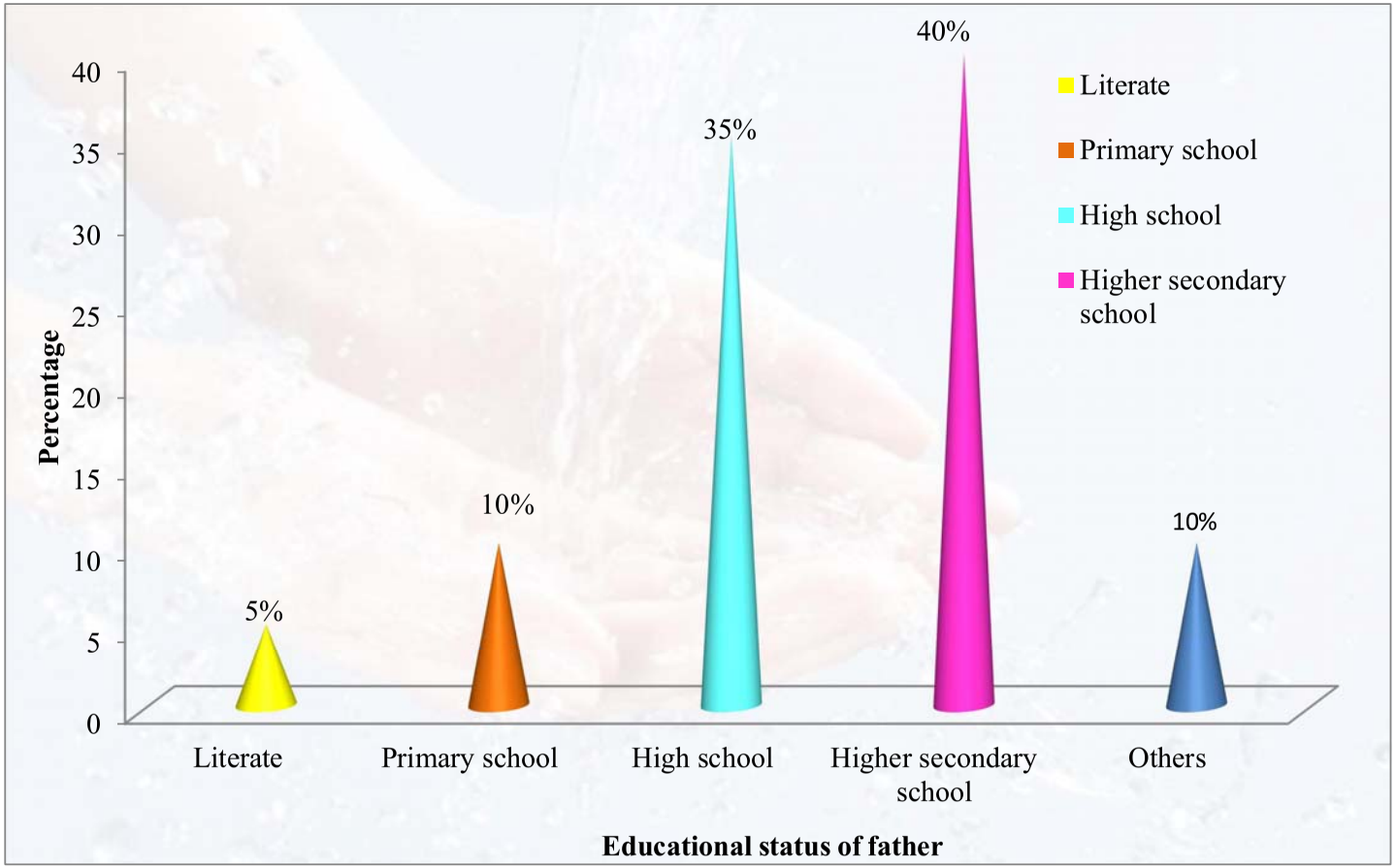

Fig No: 4 Percentage distribution of educational status of father among school children

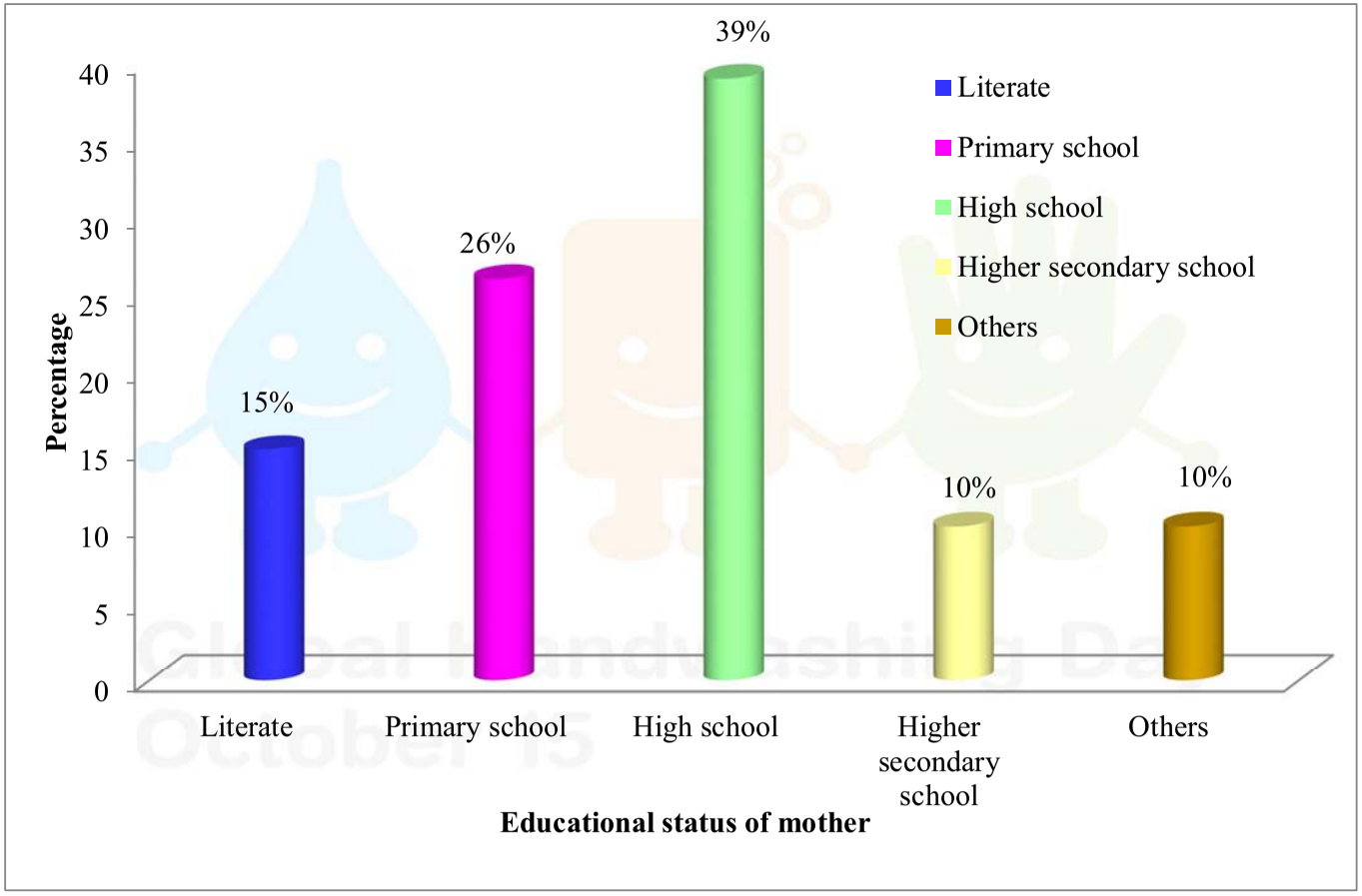

Fig No: 5 Percentage distribution of educational status of mother among school children

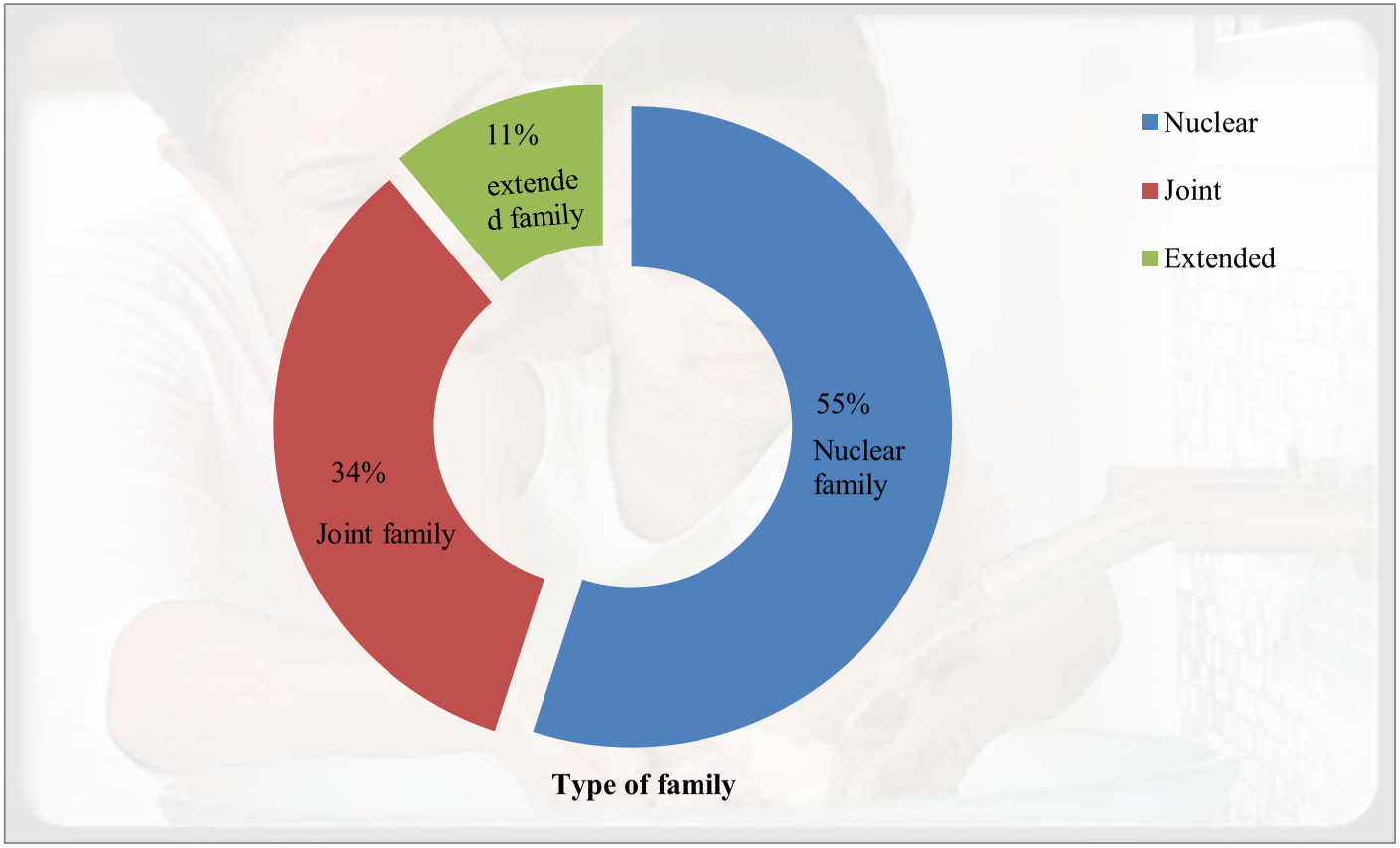

Fig No: 6 Percentage distribution of type of family among school children

Table-4

Distribution of health related variables among school children

N=100

S.No	Health related Variables		No	%
1.	Sources of water supply	Public well water	8	8.0
		Municipality water	77	77.0
		Bore well water	15	15.0
		Others	0	0.0
2.	Nature of drainage system	Open	36	36.0
		Closed	64	64.0
3.	Toilet practice	Open field defecation	45	45.0
		Closed field defecation	55	55.0
4.	Pet animals	Dog	2	2.0
		Cat	9	9.0
		Rabbit	1	1.0
		None	88	88.0
5.	Previous source of knowledge	Teacher	8	8.0
		Mass media	2	2.0
		Health personnel	1	1.0
		None	89	89.0

The above table depicts that most of the 77(77%) study participants had the source of water supply from municipality, 15(15%) had from bore well water and only 8(8%) had from public well water. Regarding nature of drainage system 64(64%) adapted closed type and 36(36%) adapted open type. With regard to usage of toilet practice 45(45%) adapted open field defecation and 55(55%) adapted closed field defecation.

While looking at the aspect of having pet animals, most of the 88(88%) study participants did not have any pet animals, 9(9%) had cat and only 2(2%) had dogs at home. Majority of 89(89%) study participants did not have previous source of knowledge, whereas 8(8%) and 2(2%) had obtained from teachers and mass media respectively.

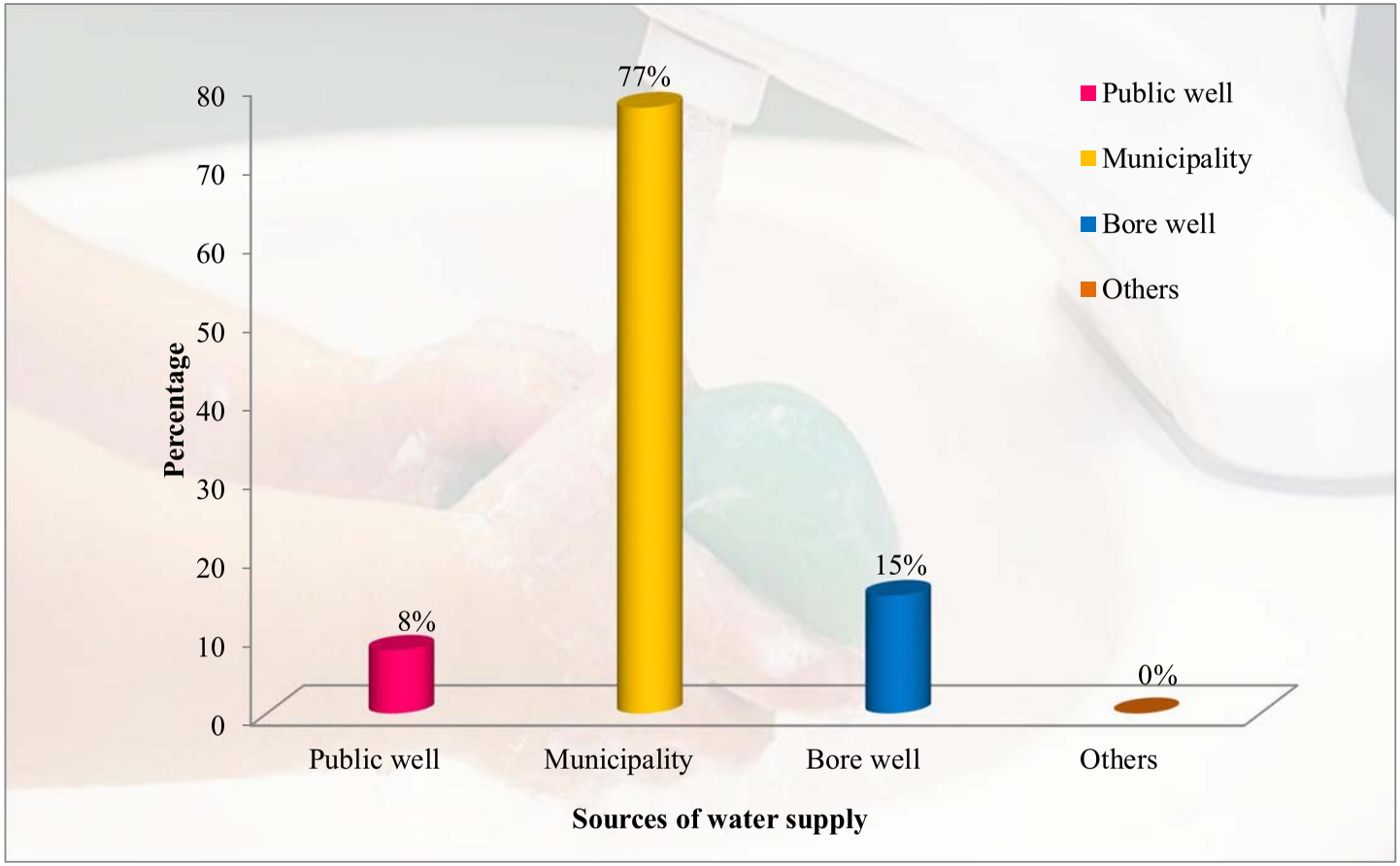

Fig No: 7 Percentage distribution of sources of water supply among school children

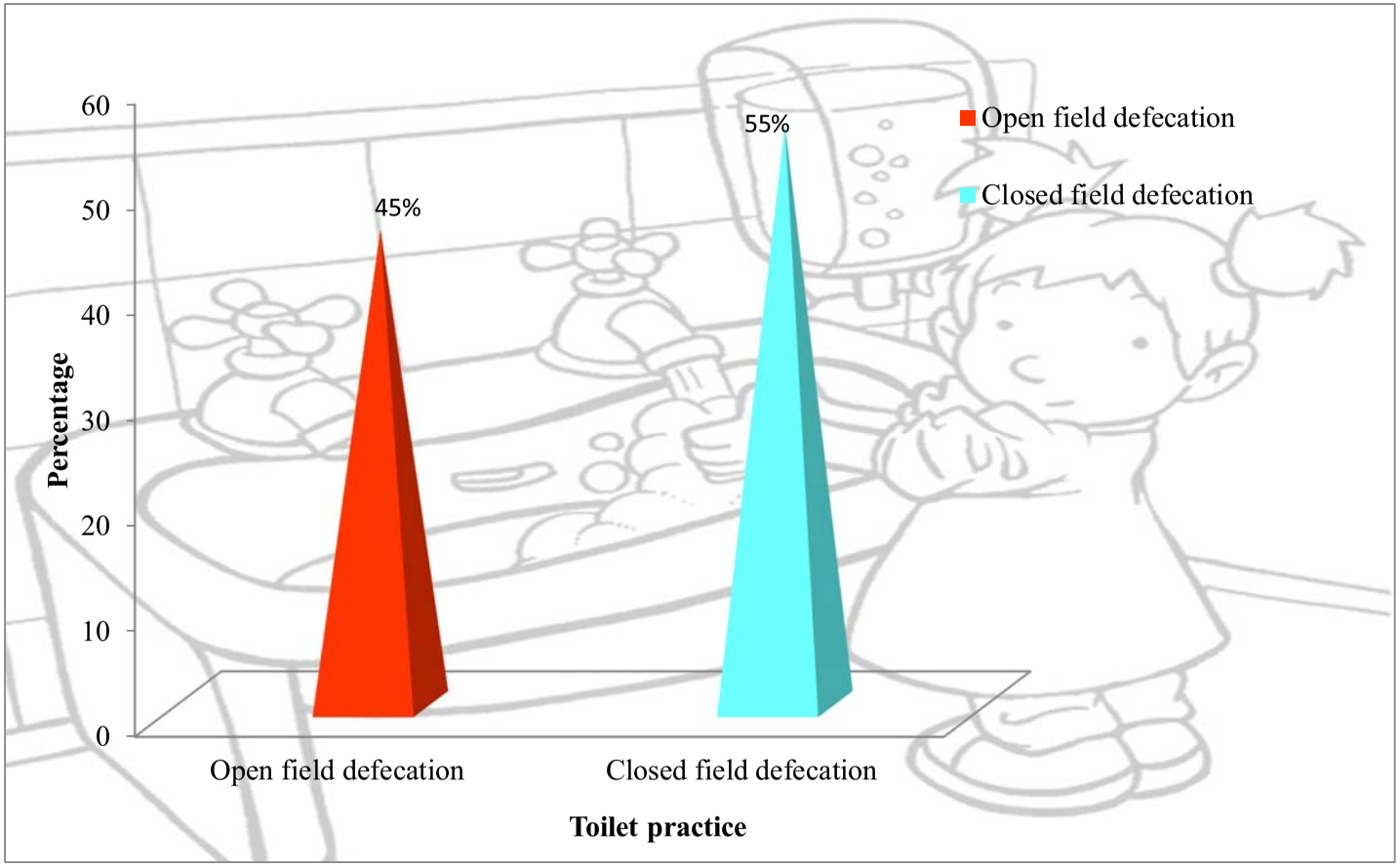

Fig No: 8 Percentage distribution of toilet practice among school children

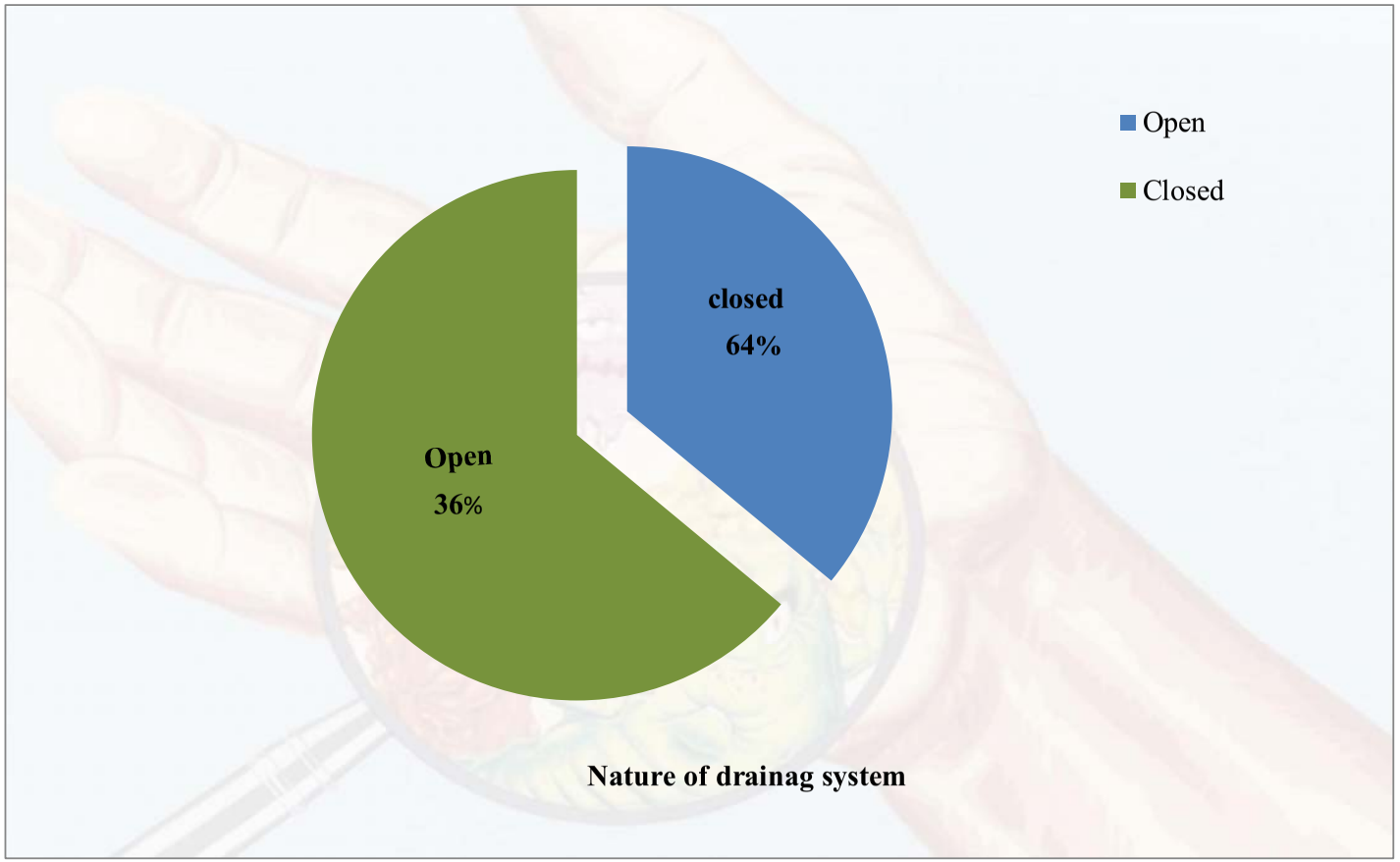

Fig No: 9 Percentage distribution of nature of drainage system among school children

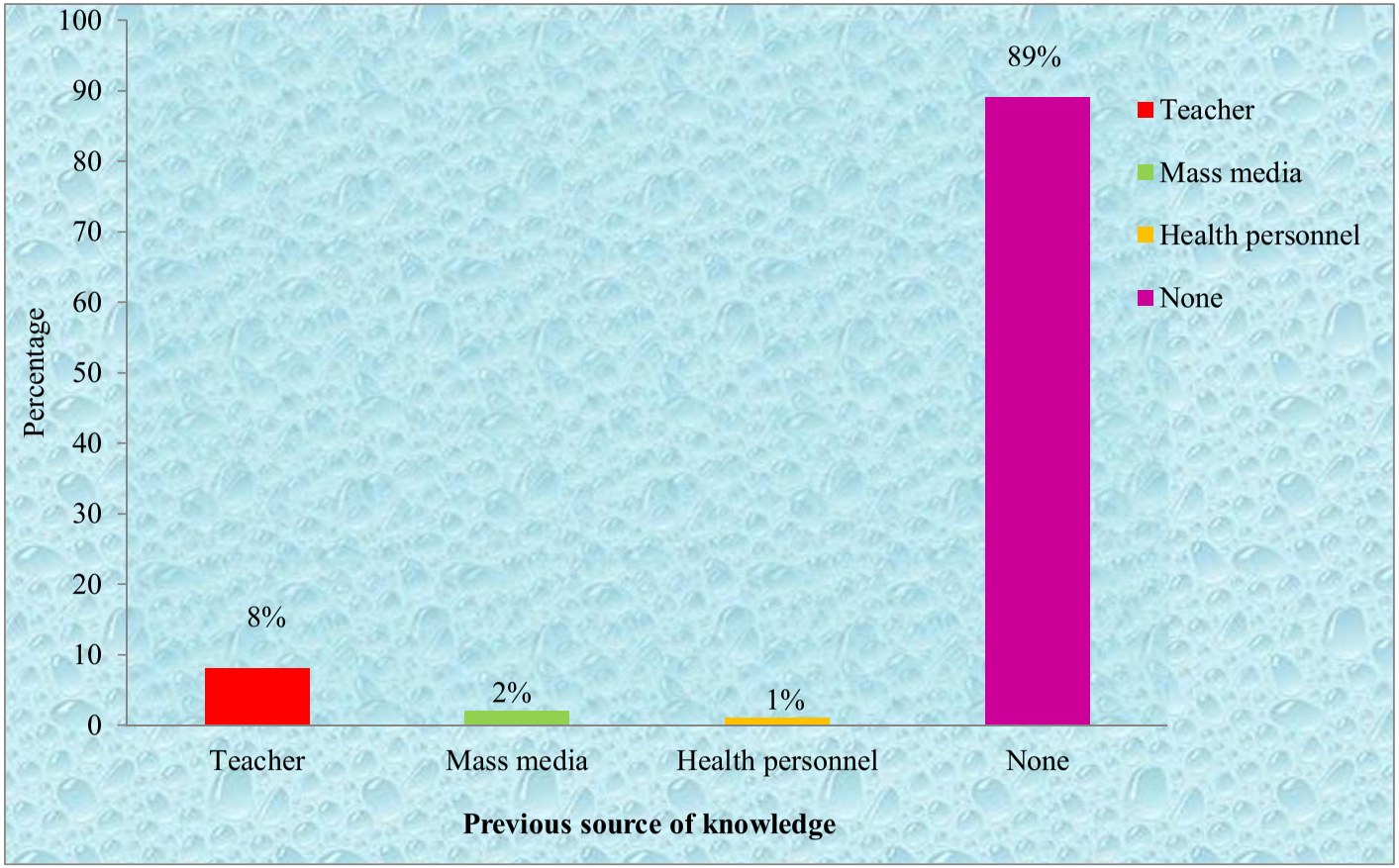

Fig No: 10 Percentage distribution of previous source of knowledge among school children

SECTION-B

Table-5

Distribution of level of knowledge on hand washing among school children in pre and post test

N=100

S.No	Level of knowledge	Pre-test		Post-test	
		No	%	N0	%
1	Inadequate knowledge	82	82.0	0	0
2	Moderate adequate knowledge	15	15.0	4	4.0
3	Adequate knowledge	3	3.0	96	96.0
Total		100	100	100	100

The above table reveals that 82(82%) study participants had inadequate knowledge whereas 15(15%) had moderately adequate knowledge only 3(3%) had adequate knowledge in pre-test. But in post-test 96(96%) study participants had adequate knowledge and 4(4%) had moderately adequate knowledge.

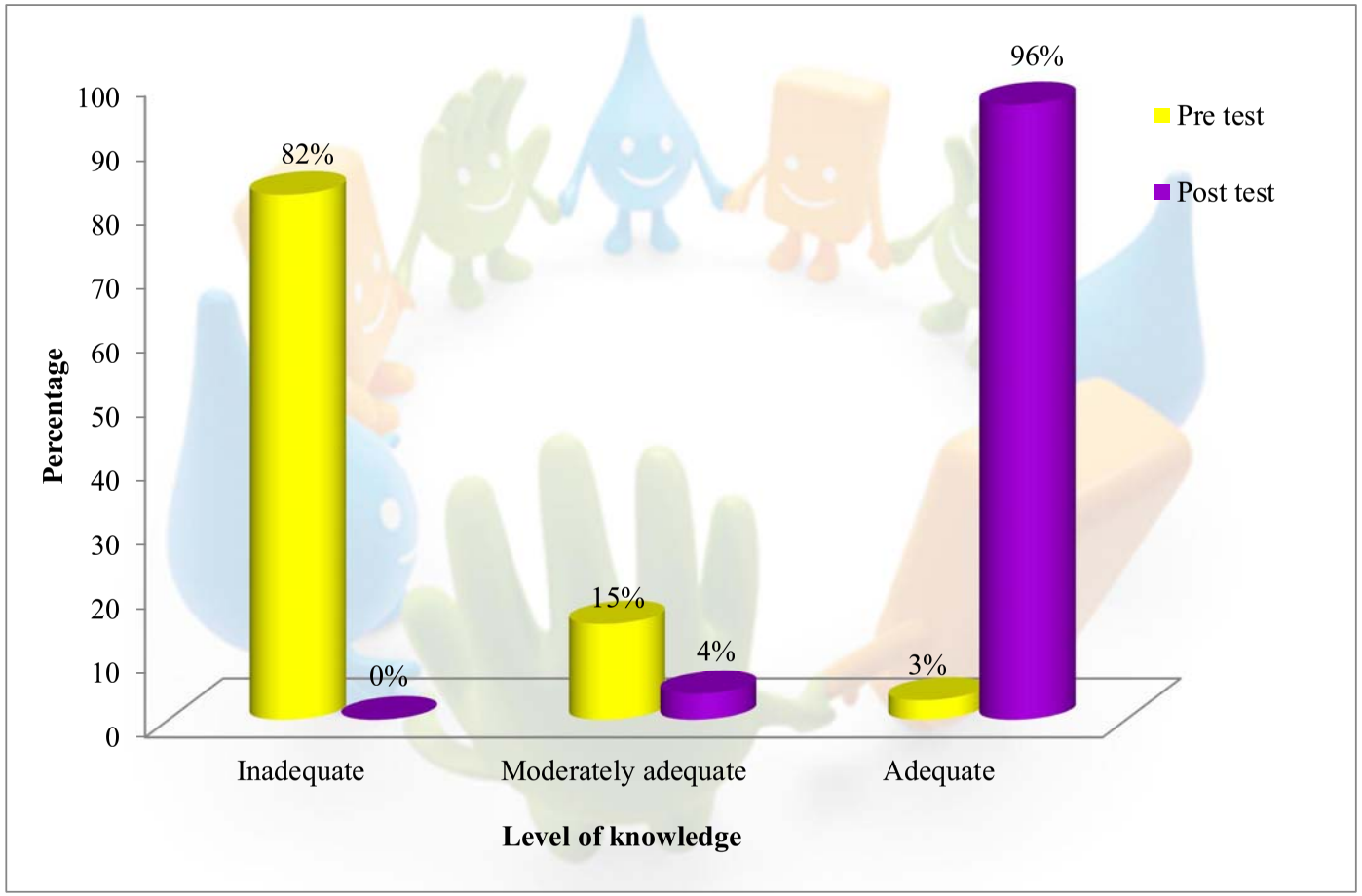

Fig No: 11 Percentage distribution of level of knowledge on hand washing among school children

Table-6

Distribution of level of practice on hand washing among school children in pre and post test

N=100

S. No	Level of practice	Pre-test		Post-test	
		No	%	No	%
1	Poor	70	70.0	3	3.0
2	Good	17	17.0	10	10.0
3	Better	10	10.0	27	27.0
4	Excellent	3	3.0	60	60.0
Total		100	100.0	100.0	100.0

The above table inferres that 70(70%) study participants had poor practice whereas 17(17%) had good practice, 10(10%) had better practice and only 3(3%) only had excellent practice in pre-test. But in post-test 60(60%) study participants had excellent practice, 27(27%) had better practice, 10(10%) had good practice and three (3%) had poor practice.

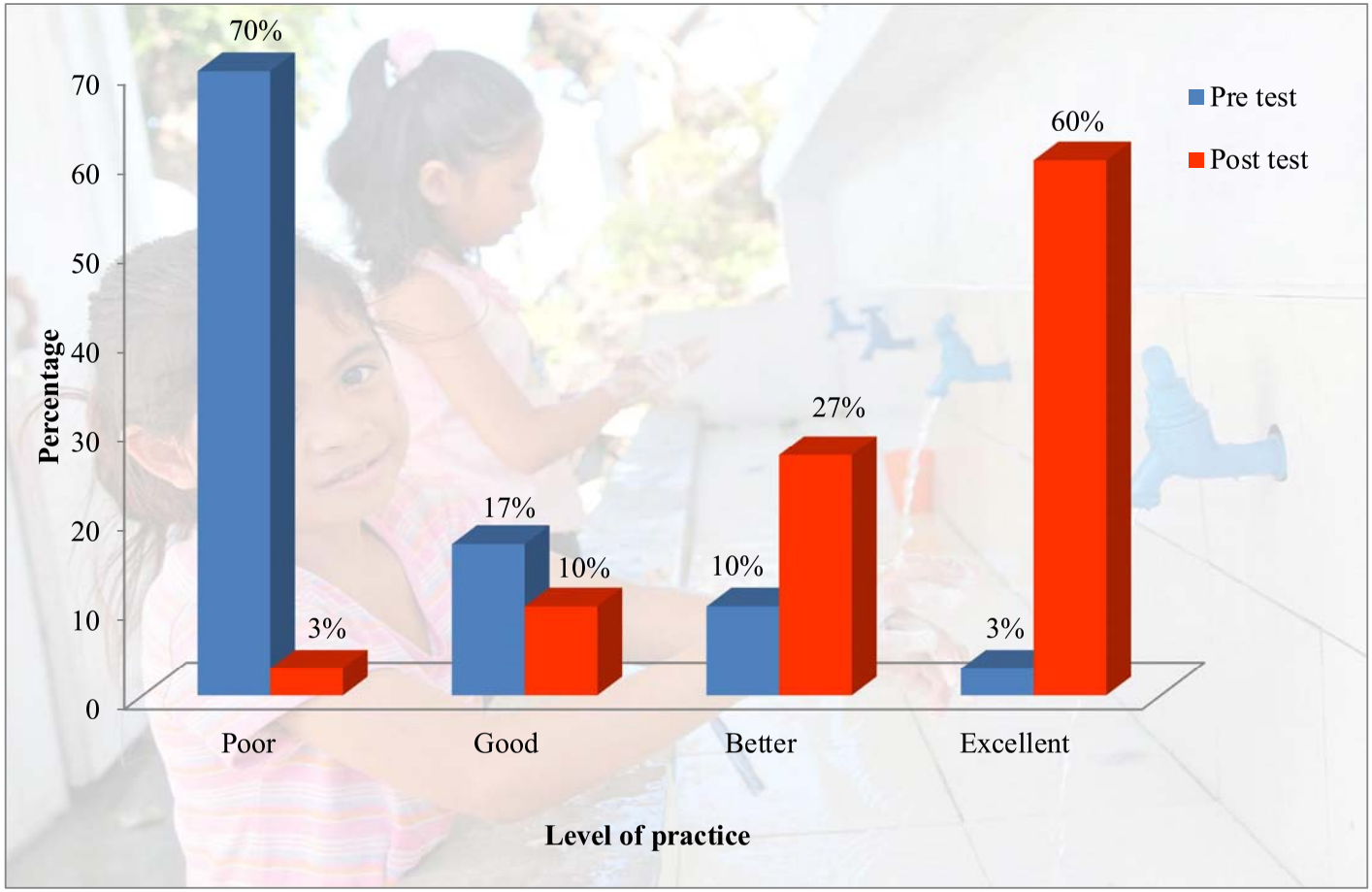

Fig No: 12 Percentage distribution of level of practice on hand washing among school children

Table-7

Distribution of level of attitude on hand washing among school children in pre and post test

N=100

S.No	Level of Attitude	Pre-test		Post-test	
		No	%	No	%
1	Good	76	76.0	9	9.0
2	Better	6	6.0	2	2.0
3	Best	18	18.0	89	89.0
Total		100	100	100	100

The above table discloses that 76(76%) study participants had good attitude whereas six (6%) had better attitude and 18(18%) had best attitude in pre-test. But in post-test 89(89%) study participants had best attitude, 2(2%) had better attitude and 9(9%) had good attitude.

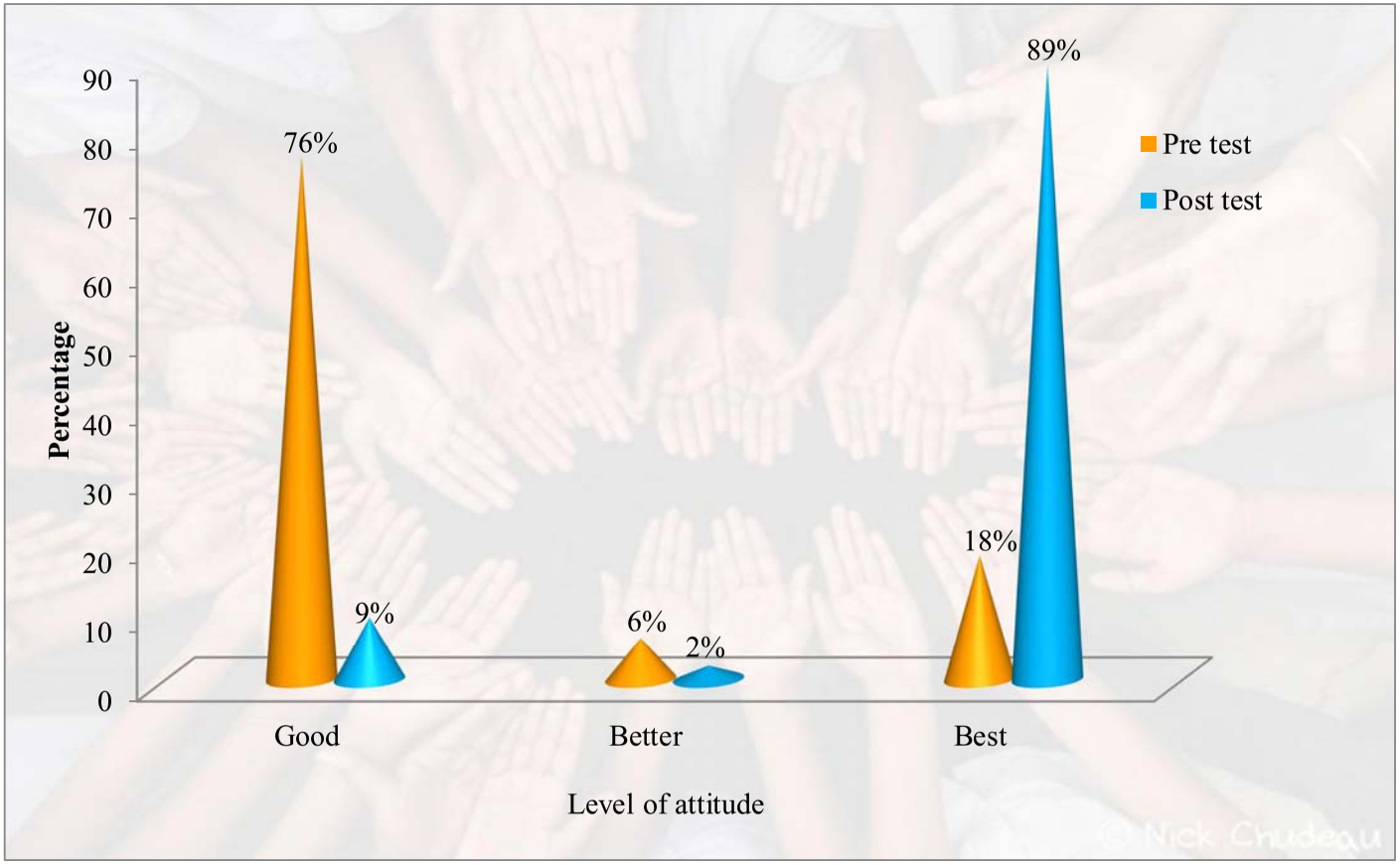

Fig No: 13 Percentage distribution of level of attitude on hand washing among school children

SECTION-C

Table-8

Comparison of pre and post test knowledge score on hand washing among school children

N=100

S.No	Observation	Mean	SD	Paired 't' value	p-value
1	Pre-test knowledge	4.32	3.44	-27.14***	0.000
2	Post-test knowledge	13.75	1.25		

***significant at p<0.001

The above table unveiles that there was a statistically significant difference at P<0.001 between pre and post knowledge score on hand washing among school children.

Table-9

Comparison of pre and post test practice score on hand washing among school children

N=100

S.No	Observation	Mean	SD	Paired 't' value	p- value
1	Pre-test practice	10.21	2.26	-20.02***	0.000
2	Post-test practice	16.57	2.37		

***significant at p<0.001

The above table illustrates that there was a statistically significant difference at P<0.001 between pre and post practice score on hand washing among school children.

Table-10

Comparison of pre and post test attitude score on hand washing among school children

N=100

S.No	Observation	Mean	SD	Paired 't' value	p- value
1	Pre-test attitude	27.61	11.82	-17.45***	0.000
2	Post-test attitude	53.55	9.59		

***significant at p<0.001

The above table unveiles that there was a statistically significant difference at P<0.001 between pre and post attitude score on hand washing among school children.

SECTION – D

Table -11

Association of socio demographic variables with level of knowledge on hand washing among school children

N=100

S.No	Socio demographic variables		Post test knowledge score						Chi Square	p value
			Inadequate		Moderately adequate		Adequate			
			No	%	No	%	No	%		
1	Age in year	10.1 – 11	0	0	1	1	49	49	1.042 NS	0.307
		11.1 – 12	0	0	3	3	47	47		
2	Gender	Male	0	0	2	2	48	48	0 NS	1.o
		Female	0	0	2	2	48	48		
3	Domicile	Urban	0	0	1	1	37	37	0.299 NS	0.585
		Rural	0	0	3	3	59	59		
4	Educational status of father	Literate	0	0	0	0	5	5	1.414 NS	0.842
		Primary school	0	0	0	0	10	10		
		High school	0	0	2	2	33	33		
		Higher secondary school	0	0	2	2	38	38		
		Others	0	0	0	0	10	10		
5	Educational status of mother	Literate	0	0	1	1	14	14	2.244 NS	0.691
		Primary school	0	0	2	2	24	24		
		High school	0	0	1	1	38	38		
		Higher secondary school	0	0	0	0	10	10		
		Others	0	0	0	0	10	10		
6	Occupational status of father	Labour	0	0	0	0	47	47	5.649 NS	0.13
		Agriculture	0	0	3	3	27	27		
		Government employee	0	0	0	0	10	10		
		Business and others	0	0	1	1	12	12		
7	Occupational status of mother	Home maker	0	0	4	4	63	63	2.052 NS	0.562
		Agriculture	0	0	0	0	23	23		
		Government employee	0	0	0	0	5	5		
		Business and others	0	0	0	0	5	5		
8	Family income per month	Below Rs. 5000	0	0	2	2	35	35	4.33 NS	0.228
		Rs. 5001 to 10000	0	0	1	1	54	54		
		Rs. 10001 to 15000	0	0	1	1	4	4		
		Rs. 15001 and above	0	0	0	0	3	3		
9	Type of family	Nuclear	0	0	2	2	53	53	0.791 NS	0.673
		Joint	0	0	2	2	32	32		
		Extended	0	0	0	0	11	11		
10	No of sibling	One	0	0	0	0	10	10	0.881 NS	0.83
		Two	0	0	2	2	50	50		
		Three	0	0	1	1	24	24		
		Four and above	0	0	1	1	12	12		

NS- Not significant

The above table shows that there was no association of socio demographic variables with level of knowledge of school children regarding hand washing.

Table -12

Association of health related variables with level of knowledge on hand washing among school children

N=100

S.no	Health related variables		Post test knowledge score						Chi square	P value
			Inadequate		Moderately adequate		Adequate			
			No	%	No	%	No	%		
1.	Sources of water supply	Public well water	0	0	0	0	8	8	0.613 NS	0.736
		Municipality water	0	0	3	3	74	74		
		Bore well water	0	0	1	1	14	14		
		Others	0	0	0	0	0	0		
2.	Nature of drainage system	Open	0	0	2	2	34	34	0.354 NS	0.552
		Closed	0	0	2	2	62	62		
3.	Toilet practice	Open field defecation	0	0	2	2	43	43	0.042 NS	0.837
		Closed field defecation	0	0	2	2	53	53		
4.	Pet animals	Dog	0	0	0	0	2	2	0.568 NS	0.904
		Cat	0	0	0	0	9	9		
		Rabbit	0	0	0	0	1	1		
		None	0	0	4	4	84	84		
5.	Previous source of knowledge	Teacher	0	0	0	0	8	8	0.515 NS	0.916
		Mass media	0	0	0	0	2	2		
		Health personnel	0	0	0	0	1	1		
		None	0	0	4	4	85	85		

NS- Not significant

The above table depicts that there was no association between health related variables and level of knowledge among school children regarding hand washing.

Table -13
Association of socio demographic variables with level of practice on hand washing among school children

N=100

S.No	Socio demographic variables		Post test practice score								Chi Square	p value
			Poor		Good		Better		Excellent			
			No	%	No	%	No	%	No	%		
1	Age in year	10.1 – 11	1	1	4	4	13	13	32	32	1.03 NS	0.79
		11.1 – 12	2	2	6	6	14	14	28	28		
2	Gender	Male	3	3	4	4	16	16	27	27	4.92 NS	0.17
		Female	0	0	6	6	11	11	33	33		
3	Domicile	Urban	2	2	1	1	8	8	27	27	6.42 NS	0.09
		Rural	1	1	9	9	19	19	33	33		
4	Educational status of father	Literate	0	0	0	0	2	2	3	3	17.34 NS	0.13
		Primary school	2	2	2	2	3	3	3	3		
		High school	0	0	4	4	10	10	21	21		
		Higher secondary school	1	1	4	4	8	8	27	27		
		Others	0	0	0	0	0	0	6	6		
5	Educational status of mother	Literate	0	0	2	2	0	0	13	13	18.15 NS	0.11
		Primary school	0	0	3	3	12	12	11	11		
		High school	3	3	2	2	10	10	24	24		
		Higher secondary school	0	0	1	1	2	2	7	7		
		Others	0	0	2	2	3	3	5	5		
6	Occupational status of father	Labour	1	1	3	3	16	16	27	27	8.01 NS	0.53
		Agriculture	1	1	4	4	5	5	20	20		
		Government employee	0	0	2	2	1	1	7	7		
		Business and others	1	1	1	1	5	5	6	6		
7	Occupational status of mother	Home maker	3	3	8	8	16	16	40	40	5.88 NS	0.75
		Agriculture	0	0	2	2	7	7	14	14		
		Government employee	0	0	0	0	1	1	4	4		
		Business and others	0	0	0	0	3	3	2	2		
8	Family income per month	Below Rs. 5000	0	0	7	7	10	10	20	20	13.05 NS	0.16
		Rs. 5001 to 10000	2	2	3	3	16	16	34	34		
		Rs. 10001 to 15000	1	1	0	0	0	0	4	4		
		Rs. 15001 and above	0	0	0	0	1	1	2	2		
9	Type of family	Nuclear	3	3	5	5	18	18	29	29	7.23 NS	0.3
		Joint	0	0	5	5	6	6	23	23		
		Extended	0	0	0	0	3	3	8	8		
10	No of sibling	One	0	0	1	1	1	1	8	8	5.22 NS	0.81
		Two	2	2	5	5	17	17	28	28		
		Three	0	0	3	3	6	6	16	16		
		Four and above	1	1	1	1	3	3	8	8		

NS- Not significant

The above table depicts that there was no association between socio demographic variables and level of practice among school children regarding hand washing.

Table -14

Association of health related variables with level of practice on hand washing among school children

N=100

S.No	Health related variables		Post test practice score								Chi square	P value
			Poor		Good		Better		Excellent			
			No	%	No	%	No	%	No	%		
1.	Sources of water supply	Public well water	1	1	1	1	0	0	6	6	7.02 NS	0.31
		Municipality water	2	2	8	8	24	24	43	43		
		Bore well water	0	0	1	1	3	3	11	11		
		Others	0	0	0	0	0	0	0	0		
2.	Nature of drainage system	Open	2	2	2	2	11	11	21	21	2.62 NS	0.45
		Closed	1	1	8	8	16	16	39	39		
3.	Toilet practice	Open field defecation	3	3	3	3	11	11	28	28	4.84 NS	0.18
		Closed field defecation	0	0	7	7	16	16	32	32		
4.	Pet animals	Dog	0	0	0	0	0	0	2	2	5.81 NS	0.75
		Cat	0	0	1	1	1	1	7	7		
		Rabbit	0	0	0	0	1	1	0	0		
		None	3	3	9	9	25	25	51	51		
5.	Previous source of knowledge	Teacher	0	0	0	0	2	2	6	6	3.67 NS	0.93
		Mass media	0	0	0	0	0	0	2	2		
		Health personnel	0	0	0	0	0	0	1	1		
		None	3	3	10	10	25	25	51	51		

NS- Not significant

The above table shows that there was no association between health related variables and level of practice regarding hand washing among school children.

Table -15

Association of socio demographic variables with level of attitude on hand washing among school children

N=100

S.No	Socio demographic variables		Post test attitude score						Chi Square	p value
			Good		Better		Best			
			No	%	No	%	No	%		
1	Age in year	10.1 – 11	3	3	1	1	46	46	1.101 NS	0.577
		11.1 – 12	6	6	1	1	43	43		
2	Gender	Male	3	3	1	1	46	46	1.101 NS	0.577
		Female	6	6	1	1	43	43		
3	Domicile	Urban	3	3	1	1	34	34	0.207 NS	0.902
		Rural	6	6	1	1	55	55		
4	Educational status of father	Literate	1	1	0	0	4	4	6.44 NS	0.596
		Primary school	1	1	1	1	8	8		
		High school	4	4	0	0	31	31		
		Higher secondary school	3	3	1	1	36	36		
		Others	0	0	0	0	10	10		
5	Educational status of mother	Literate	2	2	1	1	12	12	5.291 NS	0.726
		Primary school	2	2	0	0	24	24		
		High school	2	2	1	1	36	36		
		Higher secondary school	2	2	0	0	8	8		
		Others	1	1	0	0	9	9		
6	Occupational status of father	Labour	3	3	0	0	43	43	6.555 NS	0.364
		Agriculture	4	4	1	1	26	26		
		Government employee	0	0	0	0	10	10		
		Business and others	2	2	1	1	10	10		
7	Occupational status of mother	Home maker	6	6	2	2	59	59	2.456 NS	0.873
		Agriculture	3	3	0	0	20	20		
		Government employee	0	0	0	0	5	5		
		Business and others	0	0	0	0	5	5		
8	Family income per month	Below Rs. 5000	6	6	1	1	30	30	4.345 NS	0.63
		Rs. 5001 to 10000	3	3	1	1	51	51		
		Rs. 10001 to 15000	0	0	0	0	5	5		
		Rs. 15001 and above	0	0	0	0	3	3		
9	Type of family	Nuclear	5	5	2	2	48	48	3.086 NS	0.544
		Joint	4	4	0	0	30	30		
		Extended	0	0	0	0	11	11		
10	No of sibling	One	0	0	0	0	10	10	5.008 NS	0.543
		Two	4	4	1	1	47	47		
		Three	3	3	0	0	22	22		
		Four and above	2	2	1	1	10	10		

NS- Not significant

The above table shows that there was no association between socio demographic variables and level of attitude regarding hand washing among school children.

Table -16

Association of health related variables with level of attitude on hand washing among school children

N=100

S.No	Health related variables		Post test attitude Score						Chi square	P value
			Good		Better		Excellent			
			No	%	No	%	No	%		
1.	Sources of water supply	Public well water	1	1	0	0	7	7	2.46 NS	0.65
		Municipality water	8	8	2	2	67	67		
		Bore well water	0	0	0	0	15	15		
		Others	0	0	0	0	0	0		
2.	Nature of drainage system	Open	2	2	0	0	34	34	2.05 NS	0.35
		Closed	7	7	2	2	55	55		
3.	Toilet practice	Open field defecation	4	4	2	2	39	39	2.49 NS	0.25
		Closed field defecation	5	5	0	0	50	50		
4.	Pet animals	Dog	0	0	0	0	2	2	1.68 NS	0.94
		Cat	0	0	0	0	9	9		
		Rabbit	0	0	0	0	1	1		
		None	9	9	2	2	77	77		
5.	Previous source of knowledge	Teacher	0	0	0	0	8	8	1.52 NS	0.95
		Mass media	0	0	0	0	2	2		
		Health personnel	0	0	0	0	1	1		
		None	9	9	2	2	78	78		

NS- Not significant

The above table shows that there was no association between health related variables and level of attitude regarding hand washing among school children.

CHAPTER- V

DISCUSSION

This chapter deals with the discussion which was based on the objectives, findings obtained from the data analysis and its relation to the subjects of the study, the conceptual framework and with the reviewed literature. The aim of the study was to assess the effectiveness of structured teaching program on knowledge, practice and attitude regarding hand washing among school children at a selected school in Serkadu, Vellore district. The study findings are discussed based on the following objectives.

OBJECTIVES OF THE STUDY

1. To assess the knowledge, practice and attitude of school children regarding hand washing.

2. To evaluate the effectiveness of structured teaching programme (STP) on knowledge, practise and attitude regarding hand washing among school children.

3. To associate the selected demographic variable with knowledge, practice and attitude regarding hand washing among school children.

FIRST OBJECTIVE

To assess the knowledge, practice and attitude of school children regarding hand washing.

The analysis of knowledge score on hand washing among school children in pre test and post test disclosed that most of the 82(82%) school children had inadequate knowledge in pre test whereas 96(96%) had adequate knowledge in post test. The mean sore of pre test knowledge was 4.32 which was increased to 13.75 in post test. This shows that the knowledge on hand washing is increased among school children in the post test because of structured teaching programme. This finding is substantiated by the study conducted by **Ashutosh Shrestha and Mubashir Angolkar, (2013)** which revealed that there was an increased knowledge score from 53.8 % to 77.54% after health education. The above findings proved that structured teaching programme had yielded good result among school children in terms of gain in post test knowledge score.

Most of the 60 (60%) school children had excellent practice in hand washing in the post test whereas 70(70%) had poor hand washing practice in the pre test. Further it also revealed that 27 (27%) school children had better practice on hand washing in the post test against 10 (10%) in the pre test. In post test, only 3(3%) school children had poor level of practice on hand washing whereas it was 70 (70%) in pre test. The mean score of pre test practice 10.2 was increased to 15.47 in post test. These findings proved that there is a greater improvement in level of the practice on hand washing because of structured teaching programme. These study findings

are supported by the similar study conducted by **Ashutosh Shrestha and Mubashir Angolkar, (2013)** which highlighted that mean practice score was increased from 41.42 to 60.87 after health education intervention on hand washing. From these findings it is proved that structured teaching programme improved the level of practice on hand washing among school children.

The statistical analysis of attitude score on hand washing disclosed that 89(89%) school children had best attitude in the post test where as it was only 18(18%) in the pre test. It is inferred from these finding that majority of school children attitude was changed from the category of "good" in the pre test to "best" in the post test. It proved that structured teaching programme on hand washing improved the level of attitude on hand washing among school children. The mean score of attitude in the pre test was 27.6 and it was improved to 53.55 in the post test. These differences were elicited because of the structured teaching programme. This study finding is supported by another study conducted by **Herotova T.K.benes j, (2013)** which revealed that when knowledge score is increased participants attitude towards hand washing was positive. It is interpreted from these finding that since there is an improvement in the post test knowledge score, there is an improvement in the post test attitude score also.

SECOND OBJECTIVE

To evaluate the effectiveness of structured teaching programme (STP) on knowledge, practise and attitude regarding hand washing among school children.

The comparison of pre and post test knowledge, practice and attitude score on hand washing among school children unveiled that the mean knowledge score was 4.32 in pre test whereas in post test it was 13.75, mean of practice score was 10.21 in pre test and 16.5 in post test and mean of attitude score was 27.6 in pre test whereas in 53.5 in post test. The mean score was increased because of the administration of structured teaching programme on hand washing. The paired "t" value of comparison of pre and post test was -27.1 in knowledge, -20.02 in practice and -17.4 in attitude, which was statistically significant at level $p<0.001$.

The paired 't' value on comparison of pre and post test knowledge score on hand washing was -27.14 which was statistically significant at $p<0.001$. The comparison of pre and post test practice score elicited that the't' value was -0.20 which was statistically significant at $p< 0.001$. The paired "t" value on comparison between pre and post test of attitude score was – 17.45 which revealed the statistically significant difference at $p<0.001$.

The above finding are supported by the study conducted by **Ashutosh Shrestha and Mubashir Angolkar, (2013)** which highlighted that when knowledge score is improved, attitude also improved. From these findings it is concluded that structured teaching programme enhances the knowledge, practice and attitude on

hand washing among school children. Hence **H_1**: There is a significant difference between pre and post test level of knowledge, practice and attitude regarding hand washing among school children before and after structured teaching programme is accepted.

The school children are receptive for structured teaching programme and that influences the knowledge and practice. It is the best method to inculcate the hand washing practices among school children which will ultimately prevent the oro-fecal contamination and reduces the morbidity and mortality.

THIRD OBJECTIVE

To associate the selected demographic variables with knowledge, practice and attitude regarding hand washing among school children.

There was no association of demographic variables with level of knowledge, practice and attitude on hand washing. Hence**H_2:** There is a significant association of selected socio demographic variables and health related variables with post test level of knowledge, practice and attitude regarding hand washing among school children is rejected.

But this study finding proved that structured teaching programme improves the knowledge, practice and attitude of school children on hand washing. Thus it is the responsibility the nurse to view the problem and educate the school children to avoid the infection and promote good health.

CHAPTER – VI

SUMMARY, IMPLICATION AND RECOMMENDATION

This chapter gives a brief account of the present study, which was conducted to assess the effectiveness of structured teaching program on knowledge, practice and attitude regarding hand washing among school children, including the conclusion drawn for the nursing practice, nursing education, administration and nursing research.

SUMMARY OF THE STUDY

A study to assess the effectiveness of structured teaching programme on knowledge, practice and attitude regarding hand washing among school children at a selected school, Serkadu in Vellore District.

OBJECTIVES OF THE STUDY

1. To assess the knowledge, practice and attitude of school children regarding hand washing.

2. To evaluate the effectiveness of structured teaching programme (STP) on knowledge, practise and attitude regarding hand washing among school children.

3. To associate the selected demographic variables with knowledge, practice and attitude regarding hand washing among school children.

A quantitative approach of pre experimental one group pre and post test design was used for this study. A total of 100 school children aged between 10-12 years and studying VI or VII standard who fulfilled the inclusive criteria were selected by using stratified random sampling technique at selected school, Serkadu in Vellore District. The structured multiple choice questions, observation checklist, likert 3 point attitude scale were used for this study. Data were collected, organized and analyzed in terms of both descriptive and inferential statistics.

The findings disclosed that there was a statistically significant difference at $p<0.001$ between pre and post test on knowledge, practice and attitude regarding hand washing among school children. Hence the H_1 is accepted.

MAJOR FINDINGS OF THE STUDY

Socio Demographic variables

Frequency and percentage distribution of socio demographic variable among school children revealed that,

- Each 50(50%) participants were aged between 10.1 – 11 and 11.1-12 years. With regard to the gender of the children 50(50%) were male, 50(50%) were female.
- Most of the 62(62%) had their residence in rural and 38(38%) were in urban area.

- The distribution of educational status of father revealed that 40(40%) had higher secondary school education, 35(35%) had high school education, 10(10%) had primary and other education, and 5(5%) were literate.

- The distribution of educational status of mother revealed that 39(39%), 26(26%) had high school education and school education respectively.

- Occupational status of father revealed that 47(47%) were labour, 30(30%) were in agriculture, 13(13%) were doing business and others and 10(10%) were government employees. Occupational status of mother revealed that most of the 67(67%) were homemakers, 23(23%) were in agriculture, 5(5%) were government employees.

- Regarding family income per month it was found that 55(55%) of them had between Rs. 5001 to Rs. 10000/-, 37(37%) of them had below Rs. 5000/- only, 5(5%) had between Rs. 10001 to Rs. 15000/-.

- About type of family out of 100 children, 55(55%) of them belong to nuclear family, 34(34%) were in joint family and 11(11%) in extended type of family.

- With regard of number of sibling 52(52%) had two siblings, 25(25%) had three sibling, 13(13%) had four and above and 10(10%) had one sibling.

Health related variables

- Most of the 77(77%) study participants had the source of water supply from municipality, 15(15%) had from bore well water, and only 8(8%) were using public well water.

- Regarding nature of drainage 64(64%) adapted closed type and 36(36%) were adapted open type.

- With regard to usage of toilet practice 45(45%) adapted open field defecation and 55(55%) adapted closed field defecation.

- While looking at the aspect of having pet animals, most of the 88(88%) study participants did not have any pet animals, 9(9%) had cat and only 2(2%) had dogs at home.

- Majority of 89(89%) study participants did not have previous source of knowledge, where as 8(8%) and 2(2%) had obtained from teachers and mass media respectively.

The comparison of pre and post test scores of level of knowledge, practice and attitude on hand washing in pre and post test within study group by using paired "t" test unveiled that there was a statistically significant difference between pre and post test knowledge, practice and attitude on hand washing among study participants at level $P < 0.001$.

Association of demographic variables with level of knowledge, practice and attitude on hand washing among school children by using chi-square test depicted that no association of among study participants.

CONCLUSION

The study finding proved that the structured teaching program administered by the researcher was effective to increase the knowledge, practice and attitude of the school children on hand washing.

LIMITATION

There was difficulty to gather all the students in a single class room because of different time table with the teacher cooperation, the researcher could make it possible.

Nursing Implication

The findings of the study has implication in different field of nursing that is nursing practice, nursing education, nursing administration and nursing research.

Nursing Education

The investigator had drawn the following implication for nursing education. Nursing educator can encourage the student's nurses to organize hand washing programme to school children.

- Health education should be imparted regularly based on evidenced based practice in all nursing curriculum.

- ❖ The faculty members in nursing education can motivate the students to arrange health programs for parents regarding the hand washing techniques in attractive way, to make them to practice it.

- ❖ Nursing curriculum should prepare nurses to motivate the teachers to improve the student's knowledge, practice and attitude regarding hand washing.

Nursing Administration

- ❖ Nurse administrators should motivate the subordinates to participate in various programs and improve their knowledge and skills, with regard to hand washing practices.

- ❖ Nurse administrators can organize seminars on prevention of infection and importance of hand washing among school children.

- ❖ Nurse administrators can motivate the nurses to organize health camps and quiz program to the school children at least twice in a year, to motivate the children on hand washing practices.

- ❖ Nurse administrators can create awareness among school children regarding the consequences of poor hand washing.

- ❖ Nurse administrators can encourage the nurses to conduct the health awareness programs and regular health visits to the school children to insist on hand washing practice and its advantages.

Nursing Research

- Extensive research can be conducted to find out the health problems that occurs due to poor hand washing and can be incorporated in the nursing education and practice.

- The impact of hand washing on cross infection should be subjected to research and findings can be communicated and utilized in the practice.

- The impact of hand washing practice on childhood infection mainly diarrhea and respiratory infection can also be studied to improve the quality of life among school children.

Nursing practice

- The pediatric health nurses should take an initiate and imparting knowledge, practice and attitude to school children through periodical health education program in the school, hospitals and community settings.

- The pediatric health nurses have major role in creating awareness of healthy hand washing practice to reduce the mortality and morbidity among school children.

Recommendation

Based on the research findings the recommendations are as follows:

1. A similar study can be conducted to assess the knowledge and practice among mother of school children regarding hand washing practice.

2. A study can be conducted among different age group of children.

3. A comparative study can be conducted among the rural and urban area school children.

4. A study can be conducted to find out the knowledge of parents and teachers on hand washing practice.

5. Similar study can be conducted with large sample to generate the findings.

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APPENDIX- A

LETTER SEEKING PERMISSION FOR CONDUCTING THE STUDY

KARPAGA VINAYAGA COLLEGE OF NURSING

(Recognised by the Indian Nursing Council and Affiliated to the Tamil Nadu Dr. M.G.R. Medical University, Chennai)

G.S.T. Road, Chinna Kolambakkam, Palayanoor (P.O.) Madhuranthagam (Tk.)
Kanchipuram Dt. - 603 308. Phone : 044 - 2756 5202 / 2759 8484

Date :.....

Ref: KVCN/2015 **26/06/2015**

To

The Principal
Swamy Vivekananda Matric Higher Secondary School,
Serkadu,
Vellore District - 632115.

Respected Madam/Sir,

Sub: To request permission for research study–Ms.R.Nivetha II year M.Sc(N) Reg.,

This is for your kind information that our II year M.Sc (N) student of this college has selected the following topic for her research work as required by the Tamilnadu Dr.M.G.R. Medical University, Chennai in partial fulfilment of her M.Sc (N) programme.

"A study to assess the effectiveness of structured teaching programme on knowledge, practice and attitude regarding hand washing among school children at selected school, Serkadu in Vellore District"

She would like to conduct research study in Swamy Vivekananda Matric Higher Secondary School, Serkadu in Vellore District. Hence I kindly request you to grant permission for her study and extended your guidance and cooperation in this regard.

Thanking you,

Your's faithfully

Dr.T.KOMALAVALLI., Ph.D.,L.L.B
PRINCIPAL
PRINCIPAL
Karpaga Vinayaga College of Nursing
G.S.T. Road, Chinna Kolambakkam,
Maduranthagam.

APPENDIX –B

LETTER PERMITTING TO CONDUCT THE STUDY

Cell: 9443038476

SWAMY VIVEKANANDA MATRIC HIGHER SECONDARY SCHOOL
Regonised by the Government of Tamil Nadu
SERKADU - 632 115.
email: swamyvivekanandaserkadu@gmail.com

R. PARVATHI, M.A., M.Ed.,
Principal

Date: 29.06.2015

To

Ms. Nivetha. R
M.Sc (N) II year,
Karpaga Vinayaga College of Nursing,
Maduranthagam TK,
Kanchipuram DT, Pin-603308.

Ref: Your request letter

With reference your letter, you are permitted to conduct a study entitled "A study to assess the effectiveness of structured teaching programme regarding hand washing on knowledge, practice and attitude among school children at SVMHS School /Serkadu in Vellore district" in our school.

(PARVATHI)
Principal
PRINCIPAL
SWAMY VIVEKANANDA
MATRIC HR. SEC. SCHOOL
SERKADU-632115

APPENDIX –C

LETTER REQUESTING OPNION AND SUGGESTION OF EXPERTS FOR ESTABLISHING CONTENT VALIDITY OF TOOL

From

Ms. Nivetha. R,
MSc Nursing II year,
KarpagaVinayaga College of Nursing,
MaduranthagamTaluk,
KancheepuramDistrict.

To

_____

Through the proper channel,

Respected Sir/Madam,

Sub: Requisition for opinion and suggestions of experts for establishing content validity of research tool.

Greetings! As a part of the curriculum requirement the following research title is selected for the study

"A study to assess the effectiveness of structured teaching program regarding hand washing on knowledge, practice and attitude among school children at a selected school Serkadu, in Vellore district".

I will be highly privileged to have your valuable suggestions with regard to the establishment of content validity of Research tool. So I request you to validate my Research tool and give suggestions about the tool.

Thanking you,

Place Yours Sincerely,

Date **(Nivetha.R)**

APPENDIX – C1

ACCEPTANCE FOR TOOL VALIDATION

I hereby certify that I have validated the Research tool of **Ms. Nivetha.R, II year M.Sc Nursing** student who is undertaking research study.

"A study to assess the effectiveness of structured teaching program regarding hand washing on knowledge, practice and attitude among school children at a selected school, Serkadu in Vellore district".

The suggestions and advices are herewith enclosed.

Place: **Signature of the expert**

Date: **Name and Designation**

APPENDIX – D

RESEARCH PARTICIPANTS CONSENT FORM

Dear participants

I Ms. Nivetha.R, II year M.ScNursing student of Karpaga Vinayaga College of Nursing, MaduranthagamTaluk, Kancheepuram District. As a part of my study, I proposed to conduct research on **"A study to assess the effectiveness of structured teaching programme on knowledge, practice and attitude on hand washing among school children at a selected school, Serkadu in vellore district"**. I obtained permission from the respected principal of this school, to conduct my research work. I will teach on hand washing for 100 student who studying VI- VII standard. The duration of teaching classes will be for 45 minutes per day for a week and it will be completed within 4 weeks. The health education on hand washing will be benefit for the children and also help their sibling, family and entire community. I assure that this will not affect their academic sessions. Hence I request your valuable consent and co-operation. For any further discussions feel free to contact me in person.

I hereby seek your consent and cooperation to participate in the study. The information collected will be kept confidential.

Signature of Researcher

I _____ hereby consent to be the respondents and undergo the study.

Signature of participants

APPENDIX – E

CERTIFICATE FOR ENGLISH EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation entitled **"A study to assess the effectiveness of structured teaching programme on knowledge, practice and attitude on hand washing among school children at a selected school, Serkadu in Vellore district"** by **Ms.Nivetha.R,** IIYear M.Sc Nursing student, Karpaga Vinayaga College of Nursing, was edited for English language appropriateness.

Signature and Designation

APPENDIX –E1

CERTIFICATE FOR TAMIL EDITING

TO WHOM SO EVER IT MAY CONCERN

This is to certify that the dissertation entitled **"A study to assess the effectiveness of structured teaching programme on knowledge, practice and attitude on hand washing among school children at a selected school, Serkadu in Vellore district"** by **Ms.Nivetha.R,** IIYear M.Sc Nursing student, Karpaga Vinayaga College of Nursing, was edited for Tamil language appropriateness.

Signature and Designation

APPENDIX- F

LIST OF EXPERTS

1. **Dr. Dhanusu.M.Sc(N)., Ph.D.,**

   Principal,

   Sri ManakulaVinayaga Nursing College,

   Kalitheerthalkuppam,

   Puducherry.

2. **Mrs. Sumathy.P.M.Sc(N).,**

   Professor and Vice Principal,

   HOD of Child Health Nursing,

   Kasturiba Gandhi College of Nursing,

   PuducherryDistrict.

3. **Dr.(Mrs). Prema.M.Sc(N)., Ph.D.,**

   Principal,

   AnnaivelakanniCollege of Nursing,

   Chennai.

4. **Mrs. D.K.Shakila. M.Sc(N).,**

   Professor,

   Department of Child Health,

   Adhiparasakthi College of Nursing,

   Melmaruvathur, kancheepuram District.

5. **Dr. Ramanath. MD.,**

   Professor and HOD of Department of Pediatrics,

   KarpagaVinayaga Institute of Medical Sciences

   and Research Centre,

   MaduranthagamTaluk, Kancheepuram District.

APPENDIX- G

TOOL FOR THE STUDY

PART – I

SECTION - A

SOCIO DEMOGRAPHIC VARIABLES

Instruction: Please put tick (✓) in appropriate columns against each question.

1. **Age in years**
   a) 10.1-11 year ( )
   b) 11.1-12 year ( )
2. **Gender**
   a) Male ( )
   b) Female ( )
3. **Domicile**
   a) Urban ( )
   b) Rural ( )
4. **Educational status of father**
   a) Literate ( )
   b) Primary School ( )
   c) High school ( )
   d) Higher Secondary school ( )
   e) Others ( )
5. **Educational status of Mother**
   a) Literate ( )
   b) Primary School ( )
   c) High school ( )
   d) Higher Secondary ( )
   e) Others ( )

6. Occupational status of father

a) Labor ( )

b) Agriculture ( )

c) Government employee ( )

d) Business and others ( )

7. Occupational status of mother

a) Home maker ( )

b) Agriculture ( )

c) Government employee ( )

d) Business and others ( )

8. Family Income per month

a) Below Rs.5000/- ( )

b) Rs.5001 to 10000/- ( )

c) Rs.10001 to 15000/- ( )

d) Rs.15001/- and above ( )

9. Types of family

a) Nuclear ( )

b) Joint ( )

c) Extended ( )

10. Number of siblings

a) One ( )

b) Two ( )

c) Three ( )

d) Four and above ( )

SECTION - B

HEALTH RELATED VARIABLES

11. Sources of water supply

a) Public well water ( )

b) Municipality water ( )

c) Bore well water ( )

d) Others ( )

12. Nature of drainage system

a) Open ( )

b) Closed ( )

13. Toilet practice

a) Open field defecation ( )

b) Closed field defecation ( )

14. Pet animal

a) Dog ( )

b) Cat ( )

c) Birds ( )

d) None ( )

15. Previous source of knowledge

a) Teacher ( )

b) Mass media ( )

c) Health personnel ( )

d) None ( )

வினாக்கள்

பகுதி –I

பிரிவு – அ

சமூகம் சார்ந்த பின்னணி விவரம்

குறிப்பு: சரியான விடையை கொடுக்கப்பட்ட கட்டத்தில் (✓) பூர்த்தி செய்யவும்

1. வயது

   அ.10.1-11 வயதிற்குள் ( )

   ஆ.11.1-12 வயதிற்குள் ( )

2. பாலினம்

   அ. ஆண் ( )

   ஆ. பெண் ( )

3. வசிப்பிடம்

   அ. கிராமப்புறம் ( )

   ஆ. நகர்புறம் ( )

4. தந்தையின் கல்வித்தகுதி

   அ. படிக்க மற்றும் எழுதத்தெரிந்தவர் ( )

   ஆ. ஆரம்பநிலை கல்வித்தகுதி ( )

   இ. இடைநிலை கல்வித்தகுதி ( )

   ஈ. உயர்நிலை கல்வித்தகுதி ( )

   உ. மற்றவை ( )

5. தாயின் கல்வித்தகுதி

அ. படிக்க மற்றும் எழுதத்தெரிந்தவர் ( )

ஆ. ஆரம்பநிலை கல்வித்தகுதி ( )

இ. இடைநிலை கல்வித்தகுதி ( )

ஈ. உயர்நிலை கல்வித்தகுதி ( )

உ. மற்றவை ( )

6. தந்தையின் தொழில்

அ. கூலி ( )

ஆ. விவசாயம் ( )

இ. அரசு பணிபுரிபவர் ( )

ஈ. வியாபாரம் மற்றும் பிற ( )

7. தாயின் தொழில்

அ. குடும்பத்தலைவி ( )

ஆ. விவசாயம் ( )

இ. அரசு பணிபுரிபவர் ( )

ஈ. வியாபாரம் மற்றும் பிற ( )

8. மாத குடும்ப வருமானம்

அ. ரூ 5000 க்கு குறைவாக ( )

ஆ. ரூ 5001 - ரூ 10000க்குள் ( )

இ. ரூ 10001 – ரூ 15000க்குள் ( )

ஈ. ரூ 15000த்திற்கு மேல் ( )

9. குடும்பத்தின் வகை

அ. தனிக்குடும்பம் ( )

ஆ. கூட்டு குடும்பம் ( )

இ. விரிவான குடும்பம் ( )

10. உடன்பிறந்தவர்களின் எண்ணிக்கை

அ. ஒன்று ( )

ஆ. இரண்டு ( )

இ. மூன்று ( )

ஈ. நான்கு மற்றும் அதற்கு மேல் ( )

பிரிவு – ஆ

சுகாதாரம் சார்ந்த பின்னணி விவரம்

11. குடிநீர் கிடைக்கும் முறை

அ. பொது கிணற்றுநீர் ( )

ஆ. நகராட்சி குடிநீர் ( )

இ. ஆழ்துளை கிணற்றுநீர் ( )

ஈ. மற்றவை ( )

12. கழிவுநீர் கால்வாயின் அமைப்பு

அ. திறந்த நிலை ( )

ஆ. மூடிய நிலை ( )

13. கழிவறை வசதி

அ. திறந்தவெளி ( )

ஆ. வீட்டு கழிவறை ( )

14. செல்ல பிராணி

அ. நாய் ( )

ஆ. பூனை ( )

இ. பறவை ( )

ஈ. ஏதுமில்லை ( )

15. முந்தைய தகவல்கள் அறியபட்ட முறை

அ. ஆசிரியர்கள் மூலம் ( )

ஆ. தொலை தொடர்பு சாதனங்கள் மூலம் ( )

இ. சுகாதார பணியாளர்கள் மூலம் ( )

ஈ. யாரும் இல்லை ( )

PART-II

STRUCTURED QUESTIONNAIRES TO ASSESS THE KNOWLEDGE ON HAND WASHING

SECTION-A: MULTIPLE CHOICE QUESTIONS

PART-I GENERAL INFORMATION ABOUT HAND WASHING

Instruction: Please read the question carefully and tick (✓) the correct answer in the appropriate columns.

1. **Germ is a**
   a) Human ( )
   b) Organism ( )
   c) Animal ( )
   d) Bird ( )
2. **The number of germs present in our hand at any given time is**
   a) 5000 ( )
   b) 50000 ( )
   c) 500 ( )
   d) 50 ( )
3. **infection is a invasion of body by**
   a) ant ( )
   b) sand ( )
   c) microorganism ( )
   d) blood product ( )
4. **Infection is caused by**
   a) Evil effects ( )
   b) Germs ( )
   c) Hereditary ( )
   d) Vitamin deficiency ( )

5. The incidence of infection in children are

a) Very rare ( )

b) Not common ( )

c) Not seen ( )

d) Very common ( )

6. Normal duration of acute infection is

a) Less than 10 days ( )

b) 11 – 20 days ( )

c) 21 -30 days ( )

d) 31 – 40 days ( )

7. Preventive measure for infection is

a) Spice foods ( )

b) Unhygienic practices ( )

c) Proper hand washing ( )

d) Using cold water ( )

8. Hand washing is

a) Destroying germs ( )

b) Adding germs ( )

c) Decreasing germs ( )

d) Removing germs ( )

9. World hand washing day celebrating on

a) September 15 ( )

b) October 15 ( )

c) November 15 ( )

d) December 15 ( )

PART-II SIGNIFICANT OF HAND WASHING

10. Habits of hand washing is recommended for a child per day is

a) 3 times and as required ( )

b) 7- 10 times ( )

c) 11- 15 times ( )

d) 16- 20 times ( )

11. Indication for hand washing is

a) Before bed time ( )

b) Only after eating ( )

c) After coughing and sneezing ( )

d) Before playing ( )

12. Total steps in hand washing is

a) 8 steps ( )

b) 7 steps ( )

c) 6 steps ( )

d) 5 steps ( )

13. Wash your hands with

a) Warm water ( )

b) Cold water ( )

c) Running water ( )

d) Soap and water ( )

14. The kind of soap is recommended for hand washing is

a) Hard soap ( )

b) Soft soap ( )

c) Mixed soap ( )

d) Detergent ( )

15. Poor hand washing can cause

a) Infection ( )

b) Cleft lip ( )

c) Cleft palate ( )

d) Deaf and dumb ( )

பகுதி- II

கைகழுவுதல் பற்றிய அறிவை ஆராயும் வரையறுக்கப்பட்ட வினாக்கள்

பிரிவு- அ

பகுதி- I கைகழுவுதல் பற்றிய பொதுஅறிவு

குறிப்பு: கீழ்கண்ட வினாக்களைகவனமாக படித்து சரியான விடையை அதற்குரிய இடத்தில் (✓) செய்யவும்.

1. நோய் கிருமிகள் என்பது

அ.மனிதர் ( )

ஆ. நுண்ணுயிரி ( )

இ. மிருகம் ( )

ஈ. பறவை ( )

2. கொடுக்கபட்ட நிமிடத்தில் நம் கைகளில் இருக்கும் கிருமிகளின் எண்ணிக்கை

அ. 5000 ( )

ஆ. 50000 ( )

இ. 500 ( )

ஈ. 50 ( )

3. உடலில் எவை உட்புகுவதால் நோய்கள் ஏற்படுகிறது

அ. எறும்புகளால் ( )

ஆ. மணலினால் ( )

இ. நுண்ணுயிரிகளால் ( )

ஈ. இரத்தஉட்பொருட்களினால் ( )

4. நோய்கள் ஏற்படுத்துவது

அ. பேய்கள் தாக்கம் ( )

ஆ. நுண்ணுயிரிகளின் தாக்கம் ( )

இ. பரம்பரையாக ( )

ஈ. வைட்டமின் குறைபாடு ( )

5. குழந்தைகளிடம் நோய்களின் தாக்கம்

அ. மிகவும் அரிது ( )

ஆ. பொதுவானவை இல்லை ( )

இ. காணப்படுவதில்லை ( )

ஈ. மிகவும் பொதுவானவை ( )

6. ஆரம்பநிலை நோய்களின் கால நேரமானது

அ. 10 நாட்களுக்கும் குறைவானது ( )

ஆ. 11 – 20 நாட்களுக்குள்ளானது ( )

இ. 21 – 30 நாட்களுக்குள்ளானது ( )

ஈ. 31 –40 நாட்களுக்குள்ளானது ( )

7. நோய்கள் தடுக்கும் முறையாவது

அ. காரமான உணவு முறைகள் ( )

ஆ. சுகாதாரமற்ற முறைகள் ( )

இ. சீரான கைகழுவும் முறை ( )

ஈ. குளிர்ந்த நீரை உபயோகித்தல் ( )

8. கைகழுவுதல் என்பது

அ. கிருமிகளை அழிப்பது ( )

ஆ. கிருமிகளை அதிகபடுத்துவது ( )

இ. கிருமிகளை குறைப்பது ( )

ஈ. கிருமிகளை நீக்குவது ( )

9. உலகளவில் கைகழுவும் தினம் கொண்டாடப்படும் நாள்

அ. செப்டம்பர் 15 ( )

ஆ. அக்டோம்பர் 15 ( )

இ. நவம்பர் 15 ( )

ஈ. டிசம்பர் 15 ( )

பகுதி – II கைகழுவுதலின் கணிசமான தகவல்கள்

10. கைகழுவும் பழக்கம் குழந்தைகளுக்கு ஒரு நாளைக்கு எத்தனை முறை பரிந்துரைக்க படுகிறது

அ. 3 முறை மற்றும் தேவைக்கேற்ப ( )

ஆ. 7 – 10 முறை ( )

இ. 11 – 15 முறை ( )

ஈ. 16 – 20 முறை ( )

11. கைகழுவவேண்டியதர்க்கான அறிகுறிகள்

அ. உறங்குவதற்கு முன்பு ( )

ஆ. உணவு அருந்தியதற்க்குப் பின்பு மட்டும் ( )

இ. இரும்பல் மற்றும் தும்புதலுக்கு பின்பு ( )

ஈ. விளையாடுவதற்கு முன்பு ( )

12. கைகழுவுதலுக்கான மொத்த படிகள்

அ. 8 படிகள் ( )

ஆ. 7 படிகள் ( )

இ. 6 படிகள் ( )

ஈ. 5 படிகள் ( )

13. உங்கள் கைகளை கழுவ உபயோகபடுவது

அ. வெதுவெதுப்பான நீர் ( )

ஆ. குளிர்ந்த நீர் ( )

இ. ஓடும் நீர் ( )

ஈ. சோப்பு மற்றும் நீர் ( )

14. கைகழுவுதலுக்கு பயன்படுத்தப்படும் சோப்பபின் வகை

அ. கடுமையான சோப்பு ( )

ஆ. மென்மையான சோப்பு ( )

இ. இரண்டும் கலந்த சோப்பு ( )

ஈ. டிடர்ஜெண்ட் ( )

15. சரியாக கைகழுவுவாதலினால் ஏற்படுவது

அ. நோய்கள் ( )

ஆ. உதடு பிளவு ( )

இ. அண்ணம் பிளவு ( )

ஈ. காது மற்றும் வாய் பேசமுடியாதமை ( )

SECTION- B

OBSERVATION CHECK LIST TO OBSERVE THE PRATICE OF HAND WASHING TECHNIQUE

Instruction

Investigator places a tick (✓) mark in corresponding box according to the practice of the subject.

S.NO	ITEMS	YES	NO
1	Stands far from the sink		
2	wet the hands from tip of the finger to elbow		
3	Apply enough soap to cover all hand surfaces		
4	Scrub done in circular manner		
5	Scrubs all the area of the hands		
6	Scrubs the hands for 15 to 20 seconds		
7	Rinses the hands properly still soap off		
8	Turn off the source of water using a clean towel		
9	Dries the hands with clean cloth or paper towel		

KEYS: Yes = 2, No = 1

SCOREINTERPRETATION:

18 = excellent

14-17 = Good

10-13 = Better

9 = Poor

SECTION- C

MODIFIED LIKERT THREE POINT ATTITUDE SCALE TO ASSESS THE ATTITUDE OF HAND WASHING

Instruction: Please read carefully and tick (✓) the correct answer in appropriate columns

S.NO	ITEMS Hand washing is	SCORE		
		DISAGREE	UNCERTAIN	AGREE
1	Frustrating			
2	I would like to learn about it			
3	Not economical			
4	Positive health practice			
5	Causes damage of skin in hand			
6	Needs exclusive training			
7	Improves self efficacy			
8	Time consuming			
9	Beneficial			
10	Difficult to follow			
11	Prevent transmission of infection			
12	Inconvenient			
13	Simple measure to prevent swine flu			
14	Not practical			
15	Improves self discipline			
16	Harmful			
17	Best defense			
18	Causes diarrhea			
19	Optional			
20	Prevent upper respiratory tract infection			

Key

Positive statements- item no: 2, 4, 6, 8, 10, 12, 14, 16, 18, and 20

Score: Disagree-1, Uncertain- 2, Agree- 3

Negative statement – item no: 1, 3, 5, 7, 9, 11, 13, 15, 17, and 19

Score: Disagree- 3, Uncertain- 2, Agree- 1

பிரிவு – இ

கைகழுவுதல் பற்றிய அணுகுமுறையை அறியவுதவும் மாற்றி அமைக்கப்பட்ட லிகேர்ட் மூன்று அலகுமுறை அளவுகோள்

குறிப்பு: கவனமாக படித்து சரியான பதிலை (✓) அதற்குரிய இடத்தில் நிரப்பவும்

வ. எண்	உருபடிகள்	மதிப்பெண்		
	கைகழுவுதல் என்பது	ஏற்க மறுக்கிறேன்	தெரியவில்லை	ஏற்கிறேன்
1	வெறுப்பான செயல்			
2	கற்றுக்கொள்ள விருப்பப் படுகின்றேன்			
3	பொருளாதாரதேவை அவசியமற்றது			
4	சரியான சுகதரமான பழக்கவழக்கம்			
5	கைகளின் தோலை பாதிப்படைய செய்வது			
6	தகுந்த பயிற்சி தேவை			
7	சுயபலாபலனை அதிகரிக்கிறது			
8	நேரத்தை செலவிடுவது			
9	பயன்ப்பாடுமிக்கது			
10	கடைபிடிக்க கடினமானது			
11	நோய்கள் பரவுவதை தடுக்கிறது			
12	கஷ்டமான செயல்			
13	பன்றி காய்ச்சலை தடுக்க மிக எளிமையான வழி			
14	நடைமுறைபடுத்த முடியாத ஒன்று			
15	பாதிப்பை ஏற்படுத்தும்			

16	தன்சுத்தத்தை அதிகபடுத்துகிறது			
17	சிறந்த பாதுகாப்பு			
18	வயிற்றுப்போக்கை விளைவிக்கும்			
19	விருப்பத்திற்கு ஏற்ப			
20	மேல்பகுதி மூச்சுக்குழல் சம்பந்தபட்ட நோய்களை தடுக்கிறது			

மதிப்பீடு:

சரியான வாக்கியங்கள்–உருபடி எண்: 2, 4, 6, 8, 10, 12, 14, 16, 18 மற்றும் 20

மதிப்பெண் : ஏற்கமறுக்கிறேன்- 1, தெரியவில்லை- 2, ஏற்கிறேன்-3

தவறான வாக்கியங்கள்-உருபடி எண்: 1, 3, 5, 7, 9, 11, 13, 15, 17 மற்றும் 19

மதிப்பெண் : ஏற்கமறுக்கிறேன்- 3, தெரியவில்லை- 2, ஏற்கிறேன்-1

PART -III

HAND WASHING

Course	:	M.sc (N) II year
Subject	:	Child Health Nursing
Topic	:	Hand washing techniques
Group	:	School children
Venue	:	SVMHS School, Serkadu, Vellore Dt.
Student teacher	:	Ms. Nivetha. R
Method of teaching	:	Lecturer cum demonstration
A.V aids	:	Black board, Roller board, Chart, Banner and pamphlet.

GENERAL OBJECTIVE:

On completion of the class the children will acquire knowledge, skill and attitude on hand washing and apply it in practice with desirable attitude.

SPECIFIC OBJECTIVES:

At the end of the class the child will be able to

- explain about germs and infection
- define hand washing
- enumerate the importance of hand washing
- list the indications for hand washing
- discuss the general steps in hand washing
- explain the consequences of poor hand washing

SELF INTRODUCTION

I am Ms. Nivetha. R, studying II year M.Sc nursing in Karpaga Vinayaga College of Nursing. I would like to teach you hand washing technique to prevent the cross infection and promote your health. At the end of the class I would like to assess your knowledge. I request you to listen carefully and clarify your doubts.

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
1	At the end of the class the children will be able to explain about germs and infection	5min	**HAND WASHING** **INTRODUCTION** Germs are everywhere In our hands5000 germs are present at any given time. Hygiene is central part of the human rights obligation. Hand hygiene is very important to prevent transmission of infection. **Infection:** Infection is an invasion of the body by microorganisms. The signs and symptoms are fever, pain, chills, nausea, vomiting, and weakness. Infection is classified into: 1. Acute(develop sudden onset less than 10 days, rapid progression and often with severe symptoms) 2. Chronic(delayed onset slow progression) 3. Primary(initial infection that develop in healthy individual) 4. Secondary(infection develop in individual who	Explaining and discussing	Listening and actively participating	Black board

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
			already infected) 5. Localized(infection in specific location) 6. Systemic (infection spread to several region) 7. Endogenous(originated with in the body) 8. Exogenous(originated from outside) 9. Noso-comial infection(hospital acquired infection) 10. Opportunistic infection (caused by microorganism) 11. Latent (after following infection the pathogen remain in tissues in a hidden form). So children having high incidence of getting infection. Infection can be prevents by good hand hygiene. Clean hand promotes good health.			

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
2	define hand washing	3min	**DEFINITION** Hand washing is defined as the vigorous, brief rubbing together of all surfaces of lathered hands, followed by rinsing under a stream of water. It suspends microorganisms and mechanically removes them by rinsing with water.	Explaining and discussing	Listening	Roller board
3	enumerate the importance of hand washing	3min	**IMPORTANCE OF HAND WASHING** October 15th 2008, the first ever Global Hand washing Day was celebrated throughout the country. Good hand washing protects against the spread of many illnesses which is responsible for 22 million lost school days each year like diarrhea, upper respiratory tract infection, swine flu. So it is important to wash your hands atleast 3 times per day and as and when required. It improves our self efficacy and self discipline. **INDICATIONS FOR HAND WASHING**	Explaining and clarifying the doubts	Asking doubts	

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
4	list the indications for hand washing	5min	 ✓ Before and after eating and cooking ✓ After using the bathroom ✓ After playing with shared toys ✓ After blowing their nose, sneezing,coughing ✓ After cleaning around the house ✓ After handling garbage ✓ After touching animals, including family pets ✓ Before and after visiting or taking care of any sick friends or relatives ✓ After being outside (playing, gardening, walking, etc) ✓ After any cut injury. ✓ Before and after treating wounds	Explaining and discussing	Listening and taking notes	Chart

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
5	discuss the general steps in hand washing	20min	**GENERALSTEPS IN HAND WASHING** Hand washing contains totally six easy steps. Following each steps and every time will ensure that hands are properly cleaned and free of germs. Hand washing is convenient method and not time consuming one. A good hand washing is beneficial and easy to follow only it needs exclusive training. 			

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
			1. Wet hands Hands should be wet up to the elbow from tip f the finger, in-between fingers, underneath fingernails, wrist and on both sides of the hand with running warm water. 2. Apply soap There are huge varieties in hand soaps. In that Soft soap is recommended to use for hand washing like dettol, lifebuoy etc. Soap choice is mostly a personal choice depending on what the soap user likes. If soap and water is not available use alcohol based hand sanitizer which contain 60% alcohol. 3. Scrub hands Scrubbing should last for fifteen to twenty seconds, covering the wrists, fingers, between each finger,	Explaining and demonstrating	Listening and actively involved	Banner

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
			underneath fingernails and the palms and topsides of the hands by circular motion. A good way to know if it has been twenty seconds is to begin singing the "happy birthday song" while scrubbing. At the end twenty seconds will be over. 4. Rinse hands After twenty seconds, the soap must be rinsed off each area of the hands. It should take around five seconds of rinsing to completely remove the soap from the hands. 5. Turn off water Use the paper towel or clean cloth towel to touch the tap while turning off the water. Because it carries germs. 6. Dry hands A clean paper towel or cloth towel is used for drying the hands.	Explaining and demonstrating and clarifying doubts	Listening and actively participating	Banner

S.no	Specific Objectives	Time	Content	Teacher activity	Learners activity	Avaids
6	explain the consequences of poor hand washing	4min	**CONSEQUENCES OF POOR HAND WASHING** Hand washing is necessary to all because many nasty illnesses starts with poor hand washing. Salmonella, campylobacter, MRSA, flu, diarrhea and sickness, the common cold, impetigo these are just some of the viruses and infections passed between people who don't wash their hands. It is economical one but best defense for positive health practice. It never provides any frustration. To protect yourself from any of the illnesses must wash your hands properly. **CONCLUSION** Improving your knowledge regarding hand washing is not big thing. We need to practice the hand washing in day today life. So do frequently hand washing and keeps germs away.	Demonstrating and explaining Explaining and clarifying doubts	Actively participating Asking doubts	Banner Pamphlet

SUMMARY:

In this class we have learnt about the definition, importance, indications, general steps of hand washing and consequences of poor hand washing

CONCLUSION:

"Clean hands save live". You can maintain good hand washing means that promotes good health and prevents infection.

EVALUATION: Return demonstration.

பகுதி- III

கை கழுவுதல்பற்றிய பாட திட்டம்

வகுப்பு	: முதுகலை செவிலியர் இரண்டாம் ஆண்டு
பாட பிரிவு	: குழந்தைகள் நல செவிலியர் பிரிவு
தலைப்பு	: கை கழுவுதல்
குழு	: ஆறாவது மற்றும் ஏழாவது படிக்கும் பள்ளிக் குழந்தைகள்
இடம்	: எஸ்.வி.எம்.எச்.எஸ் பள்ளி சேர்காடு, வேலூர் மாவட்டம்
நேரம்	: 45 நிமிடங்கள்
மாணவியின் பெயர்	: ர. நிவேதா
போதனை முறை	: விரிவுரை மற்றும் செய்முறை விளக்கம்
போதனை உபகரணங்கள	: கரும்பலகை,சுருள்பலகை, விளக்கப்படம், பேனர் மற்றும் கையேடு

மையகுறிக்கோள்

இப்பாடத்தின் முடிவில் குழந்தைகள் அனைவரும் கை கழுவும் முறை பற்றிய அறிவும்,அதனை பயன்படுத்தும் முறை மற்றும் அணுகுமுறை பற்றியும் அறிந்து நடைமுறை வாழ்கையில் கடைபிடிக்க உதவியாக இருக்கும்.

செயல்முறை குறிக்கோள்

இப்பாடத்தின் முடிவில் குழந்தைகளுக்கு தெரியவேண்டியவை,

- கிருமிகள் மற்றும் நோய்கள் பற்றிய கண்ணோட்டம்
- கைகழுவுதல் பற்றிய வரையறை
- கைகழுவுதலின் முக்கியத்துவம்
- கைகழுவவேண்டிய தருணங்கள்
- கைகழுவுதளுக்கான பொதுவான வழிமுறைகள்
- கைகழுவாதலினால் ஏற்படும் விளைவுகள்

அறிமுகம்:

காலை வணக்கம், நான் கற்பக விநாயக செவிலியர் கல்லூரியில் முதுகலை செவிலியர் படிப்பு இரண்டாம் ஆண்டு படிக்கும் மாணவி. நான் உங்களுக்கு கைகழுவதை பற்றியும் அதை எந்த முறைபடி கழுவ வேண்டும் என்பது பற்றியும் விரிவாக எடுத்துரைக்க வந்துள்ளேன். நான் உங்களை கூர்ந்து கவனிக்கும் படியும் மற்றும் சந்தேகங்களை தெளிவுபடுத்திக் கொள்ளுமாறும் கேட்டுக்கொள்கிறேன்.

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
1	கிருமிகள் மற்றும் நோய்கள் பற்றிய கண்ணோட்டம்	5 நிமிடம்	**கை கழுவுதல்** **முன்னுரை:** கிருமிகள் எல்லாயிடங்களிலும் இருக்கின்றது.ஒரு நிமிடத்தில் நம் கைகளில் 5000 கிருமிகள் பற்றிக்கொள்கின்றன.சுத்தம் என்பது நம்அனைவரின் உரிமை. அதலால்நம்கைகளையும் சுத்தமாக வைப்பது மிகவும் அவசியம். இதனால் பல நோய் கிருமிகள் பரவுவது தடுக்கபடுகிறது. **நோய்கள்:** நோய்கள் என்பது நுண்ணுயிரிகள் நம் உடலில் உட்புகுந்து நமக்கு காய்ச்சல், வலி, குளிர், கொமட்டல், வாந்தி போன்ற உபாதைகளை ஏற்படுத்துவது ஆகும்.	விளக்குதல் மற்றும் விவாதித்தல்	கவனித்தல் மற்றும் சுறு சுறுப்பாக பங்கேற்றல்	கரும் பலகை

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
			நோய்களின் பிரிவுவகை: 1. ஆரம்ப நிலை நோய்: 10 நாட்களுக்குள்பரவி, விரைவில் உடல் உபாதையை தீவிரமாக ஏற்படுத்தும். 2. நீண்டகால நோய்: நீண்ட நாட்களாக இருந்து உடல் உபாதையை ஏற்படுத்தும் 3. முதன்மை நோய்: ஆரோக்கியமான ஒருவரின் உடலில் நோயானது அரம்பிக்கபடுவது. 4. இரண்டாம்நிலை நோய்: முன்பாகவே நோய்வாய்பட்டவரின் உடலில் நோய் ஏற்படுத்தும் 5. குறிபிடத்தக்க நோய்: நோய் ஒரு குறிப்பிட்ட பாகத்தில் மட்டும் ஏற்படுத்தும் 6. சிஸ்டமிக் நோய்: நோய் முதலில் ஒரு இடத்தில் ஏற்படுத்தி பிறகு உடல் முழுவதும் பரவுவது. 7. உட்புற நோய்:உடலின் உட்பகுதியிலிருந்து நோய் ஏற்படுவது.	விளக்குதல் மற்றும் விவாதித்தல்	கவனித்தல் மற்றும் சுறுசுறுப்பாக பங்கேற்றல்	கரும்பலகை

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
			8. வெளிப்புற நோய்; வெளிபுரத்திலிருந்து நோய் ஏற்படுவது. 9. நாசொகோமியால் நோய்: மருத்துவமனையின் முலம் ஏற்படும் நோய். 10. ஆப்பர்சுனிட்டிக் நோய்: நுண்ணுயிரிகளால் ஏற்படும் நோய். 11. லடென்ட் நோய்: நோய் வந்த பிறகு நம் உடலின் உள்ளே கிருமிகள் மறைந்து இருந்து நோய் ஏற்படுத்தும். ஆகையால் நோய்கள் அதிகபடியாக குழந்தைகளை தாக்குகிறது. எனவே கைகழுவுதல் மிகவும் முக்கியமானதுமான ஒன்று.சுத்தமான கையினால் சுகதரமான வாழ்வை பெறமுடியும்.	விளக்குதல் மற்றும் விவாதித்தல்	கவனித்தல் மற்றும் சுறு சுறுப்பாக பங்கேற்றல்	

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
2	கைகழுவுதல் பற்றிய வரையறை	3 நிமிடம்	**வரையறை:** கைகழுவுதல் என்பது கைகளின் அனைத்து பகுதிகளையும் திடமான முறையில் நன்கு தேய்த்து சுத்தமான வெதுவெதுப்பான ஓடும் நீரினால் கழுவுதல்.அப்படி கழுவுவதினால் கிருமிகள் கைகளிலிருந்து அகற்றபடுகிறது.	விளக்குதல்	கவனித்தல்	சுருள் பலகை
3	கைகழுவுதலின் முக்கியத்துவம் பற்றி கூறுதல்	3 நிமிடம்	**கைகழுவுதலின் முக்கியத்துவம்:** 2008 அக்டோம்பர் 15,அன்றுதான் முதன் முதலில் உலகளவில் கைகழுவும் தினம் கொண்டாடப்பட்டது.கைகழுவுவன் மூலம் பல நோய்களில் இருந்து நம்மை காத்துகொள்ளமுடியும்.குறிப்பாக 22 மில்லியன் குழந்தைகளை தாக்கி அவர்களின் பள்ளி நாட்களை குறைக்க. வயிற்று போக்கு, மூச்சு குழல் நோய், பன்றிக்காய்ச்சல் போன்ற பல			

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
4	கைகழுவ வேண்டிய தருணங்களை கூறுதல்	5 நிமிடம்	நோய்களை காரணமாக அமைகிறது.அதனால் கைகளை குறைந்தது 3 முறை மற்றும் தேவைக்கேற்ப கழுவுதல் மிகவும் அவசியமான ஒன்றாகும். இது ஒவ்வொருவரின் சுய பலாபலனையும், தன்சுத்தத்தையும் மேம்படுத்துகிறது. **கைகழுவ வேண்டிய தருணங்கள்:** ➢ உணவு அருந்துவதற்கு முன்பும் பின்பும் ➢ கழிவறைகளை பயன்படுத்திய பிறகு ➢ பொம்மைகளுடன் விளையாடிய பிறகு ➢ தும்பல் மற்றும் இரும்பியதற்கு பிறகு ➢ வீட்டை சுத்தம் செய்த பிறகு ➢ குப்பைகளையும், குப்பைதொட்டிகளை சுத்தம் செய்தபிறகு	விளக்குதல் மற்றும் சந்தேகங்களை தீர்த்தல்	சந்தேகங்களை கேட்டல்	விளக்கப் படம்

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
5	கைகழுவுதளுக்கான பொதுவான வழிமுறை கூறுதல்	20 நிமிடம்	➢ நோயுற்ற நண்பர்களையும், உறவினர்களையும் சந்திப்பதற்கு முன்பும் பின்பும் ➢ வெளியிலிருந்து வீட்டிற்கு வந்தபிறகு ➢ காயங்கள் ஏற்பட்டபிறகு ➢ காயங்களளை சிகிச்சை செய்வதற்கு முன்பும் பின்பும் **கைகழுவுதளுக்கான பொதுவான படிகள்:** கைகழுவுதல் மொத்தம் 6 எளிமையான வழிமுறைகளை கொண்டது. இந்த 6வழிமுறைகள் எப்போதும் கடைபிடிப்பதால் கைகள் சுத்தமாகவும், கிருமிகளிட மிருந்தும் பாதுகாப்பாக இருக்கும். இது நேரத்தை மீதபடுத்தி பயனுள்ளதாக அமைகிறது. அதற்க்கு சிறந்த முறையில் பயிற்சி இருந்தால் போதுமானது. 1. கைகளை நினைப்பது முதலில் கைகளை சுத்தமான ஓடும்	விளக்குதல்	கவனித்தல்	பேனர்

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
			நீரினால் கையின் நுனி, விரல்களின் இடுக்குகள், நகங்களுக்கு அடியில், மணிக்கட்டு மற்றும் முழங்கை அனைத்தையும் முன் மற்றும் பின் பக்கமாக நினைக்க வேண்டும். 2. சோப்பை உபயோக படுத்துவது இரண்டாவதாக தேவையான அளவு சோப்பை எடுத்து கைகளில் தடவ வேண்டும். மென்மையான சோப்புகள்தான் கைகழுவ சிறந்தவை என்று பரிந்துரைக் கபடுகின்றது அவை டேட்டாயில், லைப்பாய் போன்றவை. சோப்பு உபயோகபடுத்துவது என்பது அவரவர் களின் விருப்பம். சோப்பு இல்லாத வேலையில் 60% அல்கஹால் உள்ள கை சனிடிசர்ஸ் பயன்படுத்தலாம். 3. கைகளை தேய்ப்பது குறைந்தது 15 – 20 வினாடிகள் கைகளை நன்கு தேய்க்க வேண்டும். அப்படி தேய்க்கும் போது மணிக்கட்டு பகுதி,	விளக்குதல் மற்றும்செய்து காட்டல்	கவனித்தல் மற்றும் சுறுசுறுப்பாக பங்கேற்றல்	பேனர்

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
			விரல்கள், விரல்களின் இடுக்குகள், உள்ளங்கை மற்றும் உள்ளங்கையின் மேற்பகுதி அனைத்தையும் சுற்றுவாக்கில் தேய்த்து கழுவுதல் மிகவும் அவசியமான ஒன்று. 20 வினாடிகள் அறிய சிறந்த வழி “பிறந்தநாள் வாழ்த்து பாடலை” பாடி முடித்தால் போதுமானது 20வினாடிகள் முடிவடைந்துவிடும். 4. கைகளை கழுவது 20 வினாடிகள் தேய்த்தவுடன் கைகளை நீரினால் கழுவுதல் மிகவும் அவசியமான ஒன்றாகும். சோப்பு நுரை போகும் வரை நன்கு கழுவுதல் அவசியம். இது 5 வினாடிகள் எடுக்கலாம். 5. குழாயை மூடுவது சுத்தமான பேப்பர் அல்லது துணி கைக்குட்டையினால் குழாயை மூடுவது அவசியமான ஒன்று. ஏனென்றால் அந்த குழாய் கைபிடியில்	விளக்குதல் மற்றும் செய்து காட்டல்	கவனித்தல் மற்றும் சுறு சுறுப்பாக பங்கேற்றல்	பேனர்

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
6	கைகழுவாதலினால் ஏற்படும் விளைவுகளை விளக்குதல்	4 நிமிடம்	கிருமிகள் இருக்ககூடும். அவற்றை தொற்றி கொள்ளாமல் இருக்கவே அவ்வாறு செய்ய வேண்டும். 6. கைகளை காயவைப்பது சுத்தமான பேப்பர் அல்லது துணி கைக்குட்டையினால் நன்கு உலர வைக்கவேண்டும். **கைகழுவாதலினால் ஏற்படும் விளைவுகள்:** சால்மோநால்லா, கேம்பைலோபாக்டர், எம்.ஆர்.எஸ்.ஏ, ப்ளூ, வயிற்றுபோக்கு, சளி, இரும்பல், தொற்று நோய், மூச்சு குழாயில் ஏற்படும் நோய்கள் என பல நோய்கள் ஒருவரிடமிருந்து ஒருவருக்கு பரவிவிடும் ஆபத்து உள்ளது. இது போருளதரார்திியாக செலவிடுவதாக இருந்தாலும், நம்மை பாதுகாக்கும் ஒன்றாகதான் இருக்கின்றது. இதனால் எந்தவிதமான வெறுப்பும் ஏற்படுத்தாது மற்றும்	விளக்குதல்	சந்தேங்களை கேட்டல் மற்றும் கவனித்தல்	கையேடு

வ.எண்	செயல்முறை குறிகோள்கள்	நேரம்	பொருளடக்கம்	கர்பிப்பவரின் செயல்பாடு	கற்பவரின் செயல்பாடு	போதனை உபகரணம்
7		5 நிமிடம்	நம்மை பாதுகாக்கும் கருவியாகதான் இருக்கின்றது. **முடிவுரை:** கைகழுவுதல் பற்றிய அறிவை வளர்ப்பது மட்டுமின்றி அதனை செயல்முறையில் நடைமுறை படித்த வேண்டும் என்றும் கேட்டு கொள்கின்றேன். எனவே சுத்தமாக கைகளை கழுவி நோய் பரப்பும் கிருமிகளிடமிருந்து விலகி இருங்கள்.	விளக்குதல் மற்றும் சந்தேங்களை தீர்த்தல்		

பாடசுருக்கம்:

இந்த வகுப்பின் முடிவில் அனைவரும் கிருமிகள் மற்றும் நோய்கள் பற்றியும், கைகழுவுதல் பற்றிய வரையறையும், கைகழுவுதலின் முக்கியத்துவம் பற்றியும், கைகழுவவேண்டிய தருணங்கள் பற்றியும், கைகழுவுதலுக்கான பொதுவான வழிமுறைகளையும் மற்றும் கைகழுவாதலினால் ஏற்படும் விளைவுகள் பற்றியும் அறிந்து கொண்டோம்.

முடிவுரை:

"சுத்தமான கைகள் சுகாதரமான வாழ்வு". எனவே கைகழுவதலினால் ஆரோக்கியமான உடல் நலனையும், நோய்களிடமிருந்து காத்துக்கொள்ள வழிவகைசெய்கின்றது.

மதிப்பீடு: திரும்ப செய்து காட்டுதல்.

APPENDIX – H

CODING SHEET

Pre test

Socio Demographic Variable- pretest											Health Related Variables- Pretest					Knowledge question pretest																Knowledge			Practice	Attitude
Sample	Age	Religion	Residence	Type of family	Income	Occupation	Source of information	Number of children	Previous knowledge							general information about hand washing									Significant of hand washing						Total	H.W. Total	Total	Total	Total
1	1	1	1	4	3	1	1	2	1	2	2	1	2	2	1	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	18	60
2	1	1	2	3	2	2	2	2	2	2	2	2	1	4	4	2	3	4	1	3	2	2	3	1	4	1	2	1	4	3	0	0	0	9	20
3	1	1	2	2	3	3	1	1	1	1	1	2	2	4	4	1	1	1	2	3	1	2	4	2	1	4	2	4	1	1	6	4	10	14	48
4	1	2	1	3	4	1	2	3	3	2	3	2	1	4	4	2	1	4	2	3	1	2	3	1	4	4	2	1	4	3	3	1	4	9	21
5	1	1	2	4	2	2	3	2	1	1	3	1	1	4	1	1	2	3	3	4	4	3	1	3	1	4	3	4	1	2	4	5	9	15	48
6	1	2	1	3	1	1	1	1	2	1	2	2	2	4	4	2	3	4	1	4	2	2	3	1	4	1	3	4	4	3	1	2	3	9	22
7	1	1	2	4	3	4	1	3	1	2	2	1	1	4	4	2	1	4	1	3	2	2	3	1	4	1	2	1	2	3	1	1	2	9	20
8	1	2	1	5	2	2	2	2	2	4	1	2	1	1	4	3	1	4	2	1	1	2	4	2	2	4	3	2	2	1	5	3	8	12	46
9	1	1	2	4	4	1	1	1	1	4	2	1	2	4	4	2	1	2	3	4	2	3	2	2	2	4	1	2	2	1	4	3	7	12	44
10	1	2	2	1	2	3	3	1	1	2	3	2	1	4	1	1	3	4	1	3	2	2	3	1	4	1	2	1	4	3	1	0	1	9	21
11	1	1	1	3	5	2	1	2	2	3	3	1	1	4	4	2	3	3	1	3	2	3	4	1	1	1	2	1	4	1	3	2	5	9	22
12	1	2	2	5	3	4	1	2	1	1	2	2	2	4	4	2	1	4	2	3	1	2	3	1	4	4	2	1	4	3	3	1	4	9	21
13	1	2	1	4	1	1	1	1	2	2	1	2	1	4	4	1	4	2	2	3	4	3	2	1	3	4	4	4	3	1	3	3	6	10	23
14	1	2	1	2	2	2	1	2	1	3	3	2	1	4	4	2	3	4	1	4	2	2	3	1	4	1	3	4	4	3	1	2	3	9	22
15	1	1	2	3	5	1	2	1	3	2	2	1	2	4	4	2	1	4	1	3	2	2	3	1	4	1	2	1	2	3	1	1	2	9	20
16	1	1	2	4	3	3	3	2	1	3	2	1	1	4	1	2	3	4	1	3	2	2	3	1	4	1	2	1	4	3	0	0	0	9	20
17	1	1	2	5	4	1	1	1	2	2	2	1	2	2	4	1	1	1	2	3	1	2	4	2	1	4	2	4	1	1	6	4	10	14	48
18	1	2	1	3	2	4	2	1	1	3	2	2	1	4	4	1	3	4	1	3	2	2	3	1	4	1	2	1	4	3	1	0	1	9	21
19	1	1	2	4	5	2	2	2	1	1	1	1	2	4	4	1	2	3	3	4	4	3	1	3	1	4	3	4	1	2	4	5	9	15	48
20	1	1	1	1	3	1	4	1	1	2	2	1	2	4	4	2	3	3	1	3	2	3	4	1	1	1	2	1	4	1	3	2	5	9	22
21	1	1	2	3	5	4	2	1	2	3	2	2	1	4	4	2	3	4	1	3	2	2	3	1	4	1	2	1	4	3	0	0	0	9	20

22	1	1	1	4	2	1	1	2	1	4	2	2	2	4	4	3	1	4	2	1	1	2	4	2	2	4	3	2	2	1	5	3	8	12	46
23	1	2	2	5	3	1	2	2	1	2	2	2	2	4	4	2	1	4	2	3	1	2	3	1	4	4	2	1	4	3	3	1	4	9	21
24	1	2	1	4	1	2	1	2	2	3	2	2	2	4	4	2	3	4	1	4	2	2	3	1	4	1	3	4	4	3	1	2	3	9	22
25	1	1	2	3	3	1	2	4	1	3	3	1	2	4	4	2	1	2	3	4	2	3	2	2	2	4	1	2	2	1	4	3	7	12	44
26	1	2	2	4	2	1	2	2	2	2	2	2	2	2	4	2	1	4	1	3	2	2	3	1	4	1	2	1	2	3	1	1	2	9	20
27	1	1	1	5	3	1	1	1	1	3	2	1	2	4	3	1	3	4	1	3	2	2	3	1	4	1	2	1	4	3	1	0	1	9	21
28	1	2	2	3	4	4	1	3	3	2	2	2	1	4	4	1	4	2	2	3	4	3	2	1	3	4	4	4	3	1	3	3	6	10	23
29	1	1	1	4	3	2	1	2	1	3	2	1	1	4	4	2	3	3	1	3	2	3	4	1	1	1	2	1	4	1	3	2	5	9	22
30	1	2	2	2	2	1	1	2	1	2	2	2	2	4	4	2	1	4	2	3	1	2	3	1	4	4	2	1	4	3	3	1	4	9	21
31	1	1	2	4	3	4	2	2	2	2	2	1	2	4	4	1	1	1	2	3	1	2	4	2	1	4	2	4	1	1	6	4	10	14	48
32	1	2	1	5	2	1	1	4	1	2	3	2	2	4	4	2	3	4	1	4	2	2	3	1	4	1	3	4	4	3	1	2	3	9	22
33	1	2	2	4	2	3	1	2	2	1	2	2	1	4	4	2	1	4	1	3	2	2	3	1	4	1	2	1	2	3	1	1	2	9	20
34	1	1	1	3	3	1	1	2	1	3	3	2	2	2	4	2	3	4	1	3	2	2	3	1	4	1	2	1	4	3	0	0	0	9	20
35	1	2	2	3	5	2	1	1	2	2	2	2	1	4	4	1	2	3	3	4	4	3	1	3	1	4	3	4	1	2	4	5	9	15	48
36	1	1	2	4	3	1	1	2	1	3	1	1	1	4	4	1	3	4	1	3	2	2	3	1	4	1	2	1	4	3	1	0	1	9	21
37	1	1	1	2	2	1	1	1	1	2	2	1	2	4	4	2	3	3	1	3	2	3	4	1	1	1	2	1	4	1	3	2	5	9	22
38	1	2	2	4	3	1	4	2	2	3	2	2	1	4	1	2	3	4	1	3	2	2	3	1	4	1	2	1	4	3	0	0	0	9	20
39	1	1	2	3	4	2	1	2	1	2	2	1	2	4	2	2	1	4	2	3	1	2	3	1	4	4	2	1	4	3	3	1	4	9	21
40	1	2	1	3	3	1	1	2	1	3	2	2	1	3	4	3	1	4	2	1	1	2	4	2	2	4	3	2	2	1	5	3	8	12	46
41	1	1	1	4	3	4	2	2	2	4	2	1	2	4	4	2	3	4	1	4	2	2	3	1	4	1	3	4	4	3	1	2	3	9	22
42	1	2	2	4	1	4	1	1	1	2	2	2	1	4	4	2	1	4	1	3	2	2	3	1	4	1	2	1	2	3	1	1	2	9	20
43	1	1	2	1	2	1	1	2	3	3	2	1	1	4	4	1	3	4	1	3	2	2	3	1	4	1	2	1	4	3	1	0	1	9	21
44	1	2	1	4	3	2	1	2	1	4	2	2	2	4	4	2	3	3	1	3	2	3	4	1	1	1	2	1	4	1	3	2	5	9	22
45	1	1	2	3	3	1	2	1	1	2	2	1	1	4	4	2	1	4	2	3	1	2	3	1	4	4	2	1	4	3	3	1	4	9	21
46	1	2	1	4	2	1	1	1	2	3	2	2	1	2	4	2	3	4	1	4	2	2	3	1	4	1	3	4	4	3	1	2	3	9	22
47	1	2	2	3	5	2	3	2	1	2	3	2	1	4	4	2	1	4	1	3	2	2	3	1	4	1	2	1	2	3	1	1	2	9	20
48	1	2	1	4	5	3	4	2	2	2	1	2	2	4	4	2	1	2	3	4	2	3	2	2	2	4	1	2	2	1	4	3	7	12	44
49	1	2	2	5	3	1	2	2	1	3	2	2	1	4	4	2	3	4	1	3	2	2	3	1	4	1	2	1	4	3	0	0	0	9	20
50	1	2	2	4	2	1	1	2	2	2	2	2	2	4	4	1	3	4	1	3	2	2	3	1	4	1	2	1	4	3	1	0	1	9	21
51	2	1	2	3	3	4	1	2	1	2	2	1	2	4	4	2	3	3	1	3	2	3	4	1	1	1	2	1	4	1	3	2	5	9	22
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POST TEST

Socio Demographic Variable- posttest									Health Related Variables- Posttest							knowledge posttest																	knowledge			Practice	Attitude
mple	Age	nd	mi	u.f	u. mo	cp. fat	cp. mo	m.i nc	p.i am	sib u.	wa	d rai	.pr	.an	sou	General information about hand washing									significant of hand washing							Gl. tot	el W. tot	Total	Total	Total
1	1	1	1	4	3	1	1	2	1	2	2	1	2	2	1	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	18	60
2	1	1	2	3	2	2	2	2	2	2	2	2	1	4	4	1	2	3	2	4	1	3	4	2	1	4	3	4	4	1	8	5	13	14	55
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4	1	2	1	3	4	1	2	3	3	2	3	2	1	4	4	1	1	2	2	3	1	3	4	2	1	4	3	4	2	1	7	6	13	18	50
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60	2	1	2	3	2	2	1	1	2	2	2	1	2	4	4	3	1	3	2	3	1	3	4	1	1	4	3	4	4	3	6	4	10	12	49
61	2	1	1	2	3	1	1	2	1	2	1	1	1	4	4	4	1	3	2	4	1	3	4	2	4	4	3	4	2	1	8	5	13	9	58
62	2	2	2	3	1	2	2	2	2	4	3	2	1	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	18	60
63	2	2	2	4	3	2	1	4	2	2	2	2	2	4	4	1	1	3	3	2	1	3	4	4	1	4	3	4	2	1	6	6	12	18	60
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65	2	2	2	3	3	1	3	2	2	4	2	2	1	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	18	58
66	2	2	2	3	4	1	1	1	1	3	2	2	2	4	4	1	1	3	2	4	2	2	4	2	1	4	3	4	2	1	7	6	13	18	30
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68	2	1	1	2	3	2	1	2	1	4	2	2	1	4	4	1	3	2	2	4	1	3	4	2	1	4	3	4	2	1	7	6	13	9	34
69	2	2	2	4	2	1	2	2	1	2	1	2	2	4	4	1	1	3	2	3	1	3	4	2	1	4	3	4	2	1	8	6	14	18	59
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71	2	2	2	4	1	1	1	1	1	3	2	2	1	2	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	12	59
72	2	2	1	3	3	2	1	2	1	2	2	2	2	4	1	1	1	3	2	4	1	3	1	2	1	4	3	4	2	1	8	6	14	18	60
73	2	1	2	4	2	4	2	1	1	1	2	1	1	4	4	1	1	1	2	4	2	3	4	2	1	4	3	4	2	1	7	6	13	16	60
74	2	2	2	3	3	1	1	1	2	2	2	2	2	4	4	1	1	3	2	4	1	2	4	4	1	4	3	4	2	1	7	6	13	14	58

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78	2	2	2	4	2	3	2	2	1	2	2	2	2	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	15	59
79	2	1	2	5	3	2	1	1	2	3	2	1	1	4	4	1	1	3	2	4	2	3	4	2	3	4	3	4	2	1	8	5	13	18	49
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81	2	2	2	3	3	2	1	2	2	3	2	2	1	2	4	1	1	4	2	4	1	3	4	2	1	4	3	2	2	1	8	6	14	18	56
82	2	1	2	4	1	1	2	2	1	2	2	1	2	4	4	1	1	3	2	4	1	4	4	3	1	4	3	4	2	1	7	6	13	18	28
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86	2	1	1	3	1	2	2	1	2	3	2	2	2	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	4	8	5	14	18	58
87	2	1	2	2	3	1	1	2	2	2	2	1	1	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	18	56
88	2	1	1	4	4	1	1	2	1	2	2	1	2	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	16	54
89	2	2	2	3	1	2	1	1	2	2	2	2	1	4	4	1	1	3	3	4	1	3	4	2	1	1	4	4	2	1	9	4	13	18	57
90	2	1	2	4	4	1	1	2	1	2	2	1	1	4	4	1	1	3	2	1	2	2	4	2	1	4	3	4	2	1	6	6	12	17	59
91	2	2	2	1	3	1	1	1	2	1	2	2	2	4	4	2	1	3	2	1	1	3	4	2	1	4	3	4	2	1	7	6	13	18	58
92	2	2	1	4	1	3	4	2	3	2	3	2	1	2	4	1	3	3	2	4	1	3	4	3	1	4	3	4	2	1	7	6	13	18	50
93	2	1	2	5	5	2	1	1	1	3	2	1	2	4	4	1	1	3	2	4	1	3	4	2	4	4	3	4	2	1	9	5	14	14	58
94	2	1	2	3	3	4	1	1	3	2	3	2	2	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	16	48
95	2	2	1	4	5	1	1	2	3	4	2	2	1	4	4	1	1	3	2	4	1	3	4	2	1	2	3	4	2	1	9	6	15	18	59
96	2	1	2	3	1	2	1	2	1	2	2	2	1	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	18	60
97	2	1	1	4	3	1	1	1	3	1	2	1	1	4	4	1	1	3	2	4	1	3	4	2	1	4	3	4	2	1	9	6	15	18	60
98	2	2	2	2	4	2	2	1	2	2	2	2	2	4	4	1	1	2	2	4	1	2	4	2	4	4	3	4	2	1	7	5	12	13	30
99	2	2	1	3	1	3	1	2	1	2	3	2	2	4	1	1	1	3	1	4	1	3	2	1	1	4	3	4	2	1	6	6	12	18	60
100	2	1	1	4	3	1	2	1	3	1	2	2	2	1	4	3	1	3	2	4	1	3	4	2	1	4	3	4	2	1	8	6	14	18	59

APPENDIX-I


Scholar conducting pre test for VI and VII standard school children


Scholar conducting structured teaching programme to VI and VII standard school children


Scholar demonstrating on steps of hand washing for VI and VII standard school children


Re-demonstration on steps of hand washing by VI and VII standard school children

Scholar conducting post test for VI and VII standard school children